

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SECOND ANNUAL REPORT

TO THE
GOVERNOR OF CALIFORNIA
BY THE
DIRECTOR OF PUBLIC WORKS

JANUARY, 1949

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STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SECOND ANNUAL REPORT

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GOVERNOR OF CALIFORNIA
BY THE
DIRECTOR OF PUBLIC WORKS

January, 1949



EARL WARREN
Governor

C. H. PURCELL
*Director of Public Works and
Chairman, California Highway Commission*

G. T. McCOY
*State Highway Engineer
and Chief of Division of Highways*

TABLE OF CONTENTS

	Page
Personnel of the Division of Highways.....	4
Personnel of the California Highway Commission.....	6
Calendar of Meetings of California Highway Commission.....	6
Past Members of the California Highway Commission.....	7
Letter of Director of Public Works to the Governor.....	9
Annual Report of the State Highway Engineer.....	10
Operations.....	19
Construction.....	19
Maintenance.....	25
Materials and Research.....	39
Equipment.....	41
Administration.....	47
Federal Aid.....	47
Federal Secondary Roads.....	54
City and Cooperative Projects.....	58
Highway Stores Department.....	60
Planning.....	65
The Budget.....	65
Design.....	67
Traffic.....	75
Planning Survey.....	75
Public and Employee Safety Relations.....	77
Bridges.....	79
Preliminary Investigation.....	79
Bridge Design.....	79
Bridge Construction.....	83
Bridge Maintenance and Research.....	84
Railroad Grade Separations and Crossing Protection.....	84
Federal Aid Secondary County Bridges.....	86
San Francisco-Oakland Bay Bridge and Carquinez Bridge.....	88
Personnel and Contractors Prequalification.....	95
Personnel.....	95
Prequalification of Contractors.....	96
Prevailing Wages and Labor Relations.....	96
Buildings and Plants.....	97
Right of Way.....	99
Legal.....	103
Accounting.....	105
Appendix A	
Accounting and Financial Statements.....	107
Appendix B	
Apportionment of Motor Vehicle Fees and Fuel Taxes.....	127
Appendix C	
Contract Statistics.....	133
Appendix D	
Average Contract Prices.....	189
Appendix E	
Map of California Showing State Highway System (See Pocket Inside Back Cover)	

LIST OF ILLUSTRATIONS

	Page
Redwood Highway, Five Miles North of Lanes Flat, Mendocino County.....	8
Pascoe Street Overcrossing of Balboa Parkway in San Diego.....	14
Noyo River Bridge Near Ft. Bragg, Mendocino County.....	18
Ridge Route North of Castaic on U. S. 99, Los Angeles County.....	20
Grading New Highway at Waddell Bluffs North of Santa Cruz.....	21
Freeway Construction on U. S. 40 Near Vallejo, Solano County.....	21
Grading in Feather River Canyon Near Rock Creek, Butte County.....	22
A Portion of Arroyo Seco Parkway in Los Angeles.....	24
Completed Highway at Waddell Bluffs North of Santa Cruz.....	26
Self-Propelled Pavement Joint Cleaner, Chisel Type.....	28
Terminal Island Overcrossing of U. S. 101 Alternate Near Long Beach.....	29
Freeway South of Santa Barbara, Showing Outer Highway Design.....	30
Pavement Joint Cleaner, Wheel Type.....	32
Truck Mounted Mower for Roadside Maintenance.....	35
Trailer Type Weed Burner.....	35
Telescoping Tree Trimming Tower.....	36
Freeway South of Santa Barbara, U. S. 101.....	38
Oil Distributing Truck Built in Headquarters Shop.....	42
Rear View of Oil Distributing Truck Built in Headquarters Shop.....	43
Underpass Near Auburn, Placer County.....	44
Scott Creek Bridge, Lake County.....	44
Cuesta Grade Near San Luis Obispo.....	46
Bay Shore Freeway and Peninsular Avenue Overcrossing in San Mateo.....	48
City Creek Bridge, San Bernardino County.....	51
Bailey Hill Underpass, Siskiyou County on U. S. 99.....	51
Bidwell Bar Bridge Across Feather River a F. A. S. Project.....	56
Hacienda Bridge Across Russian River, Sonoma County. Before Widening.....	57
Hacienda Bridge After Widening, F. A. S. Project.....	57
Stores Department Warehouse in Sacramento.....	62
Bay Shore Freeway Between Burlingame and South San Francisco.....	66
Bay Shore Freeway Near South San Francisco.....	68
Sixth Street Viaduct Over Santa Ana Parkway.....	68
Six Lane Bay Shore Freeway in San Mateo.....	74
Traffic on San Francisco-Oakland Bay Bridge.....	76
Alameda Creek Bridge Between Niles and Sunol, Alameda County.....	78
Minkler Underpass, Kern County on U. S. 99.....	80
Hare Creek Bridge Near Ft. Bragg, Mendocino County.....	80
Chino Creek Bridge, Riverside County.....	81
19th Avenue Undercrossing on East Shore Freeway, Oakland.....	82
Bailey Hill Underpass, Siskiyou County, During Construction.....	82
Salsipuedes Street Overpass in Santa Barbara.....	85
23d Avenue Undercrossing on East Shore Freeway, Oakland.....	85
29th Avenue Undercrossing on East Shore Freeway, Oakland, Under Construction.....	86
Divided Highway Near Malibu, Los Angeles County.....	94

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
C. H. PURCELL, Director of Public Works

DIVISION OF HIGHWAYS

G. T. McCoy, *Sacramento*

State Highway Engineer and Chief of Division of Highways

HEADQUARTERS STAFF

Public Works Building, Sacramento

FRED J. GRUMM-----Deputy State Highway Engineer

OPERATIONS

R. M. GILLIS-----Assistant State Highway Engineer
EARL WITTHYCOMBE-----Construction Engineer
T. H. DENNIS-----Maintenance Engineer
T. E. STANTON-----Materials and Research Engineer
R. H. STALNAKER-----Equipment Engineer

ADMINISTRATION

RICHARD H. WILSON-----Assistant State Highway Engineer
H. C. McCARTY-----Office Engineer
H. B. LaFORGE-----Engineer County and Cooperative Projects
L. V. CAMPBELL-----Engineer City and Cooperative Projects
MILTON HARRIS-----Stores Engineer

PLANNING

J. W. VICKREY-----Assistant State Highway Engineer
J. C. YOUNG-----Traffic Engineer
A. M. NASH-----Design Engineer
J. C. WOMACK-----Assistant Planning Engineer
K. C. MacLACHLAN-----Highway Planning Economist
H. L. KILE-----Budget Engineer

BRIDGES

F. W. PANHORST-----Assistant State Highway Engineer
STEWART MITCHELL-----Design Engineer
I. O. JAHLSTROM-----Bridge Construction Engineer
E. L. WALSH-----Bridge Office Engineer
H. C. WOOD-----San Francisco-Oakland Bay Bridge Engineer

PERSONNEL, PREQUALIFICATION, ETC.

J. G. STANDLEY-----Assistant State Highway Engineer
E. J. SALTINE-----Principal Highway Engineer

RIGHT OF WAY

FRANK C. BALFOUR-----Chief Right of Way Agent
R. S. J. PIANEZZI-----Assistant Chief Right of Way Agent, Administration
E. M. MACDONALD-----Assistant Chief Right of Way Agent, Appraisals
E. F. WAGNER
Assistant Chief Right of Way Agent, Field Supervision, South
G. S. PINGRY
Assistant Chief Right of Way Agent, Field Supervision, North

ACCOUNTING

E. R. HIGGINS-----Comptroller

DISTRICT ENGINEERS

<i>District</i>	<i>Office</i>
I. G. F. HELLESOE-----	Eureka
II. F. W. HASELWOOD-----	Redding
III. C. H. WHITMORE-----	Marysville
IV. JNO. H. SKEGGS, Assistant State Highway Engineer-----	San Francisco
B. W. BOOKER, District Engineer, Administration	
L. A. WEYMOUTH, District Engineer, Operations	
V. LESTER H. GIBSON-----	San Luis Obispo
VI. E. T. SCOTT-----	Fresno
VII. S. V. CORTELYOU, Assistant State Highway Engineer-----	Los Angeles
A. D. GRIFFIN, District Engineer, Administration	
P. O. HARDING, District Engineer, Operations	
VIII. E. Q. SULLIVAN-----	San Bernardino
IX. S. W. LOWDEN-----	Bishop
X. C. E. WAITE-----	Stockton
XI. E. E. WALLACE-----	San Diego

STATE OF CALIFORNIA
CALIFORNIA HIGHWAY COMMISSION

C. H. PURCELL, Chairman, Ex Officio	Sacramento
JAMES A. GUTHRIE, San Bernardino	Term expires Jan. 15, 1949
CHESTER H. WARLOW, Fresno	Term expires Jan. 15, 1949
HARRISON R. BAKER, Pasadena	Term expires Jan. 15, 1950
HOMER P. BROWN, Placerville	Term expires Jan. 15, 1951
C. ARNHOLT SMITH, San Diego	Term expires Jan. 15, 1951
F. WALTER SANDELIN, Ukiah	Term expires Jan. 15, 1952
GEO. W. SAVAGE, Secretary	Sacramento

CALENDAR OF MEETINGS
CALIFORNIA STATE HIGHWAY COMMISSION

July 1, 1947, to June 30, 1948

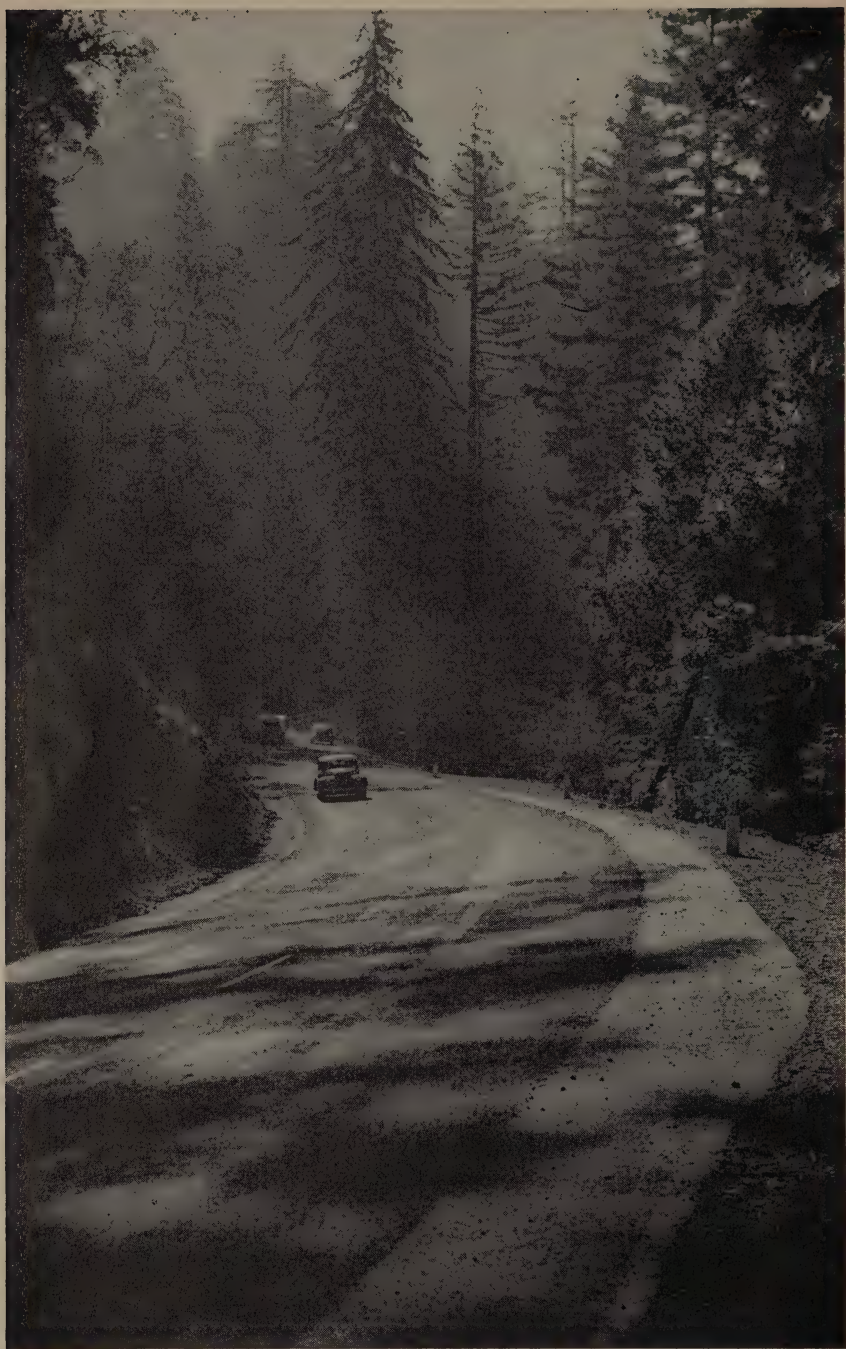
July 17, 1947	San Diego
August 21, 1947	San Francisco
September 17 and 18, 1947	Sacramento
October 29, 30, and 31, 1947	Los Angeles
November 1, 1947	Los Angeles and Lake Arrowhead
November 12 and 13, 1947	Sacramento
December 10 and 11, 1947	Sacramento
January 21 and 22, 1948	Sacramento
February 19, 1948	Sacramento
March 17 and 18, 1948	Sacramento
April 14 and 15, 1948	Sacramento
May 19 and 20, 1948	Oakland
June 23 and 24, 1948	Sacramento

PAST MEMBERS OF THE CALIFORNIA HIGHWAY COMMISSION

Name	Residence	Date of appointment	Termination of membership
Burton A. Towne*-----	Lodi-----	Aug. 2, 1911	Resigned Jan. 14, 1914
Charles D. Balney*-----	Saratoga-----	Aug. 2, 1911	Resigned Mar. 1, 1917
N. D. Darlington-----	Los Angeles-----	Aug. 2, 1911	Resigned Jan. 8, 1923
Charles F. Stern-----	Eureka-----	Jan. 15, 1914	Resigned Dec. 21, 1918
Henry J. Widenmann*-----	Vallejo-----	Mar. 1, 1917	Died Oct. 6, 1918
Charles A. Whitmore-----	Visalia-----	Nov. 29, 1918	Resigned Jan. 8, 1923
Emmett Phillips*-----	Sacramento-----	Dec. 21, 1918	Died June 18, 1919
George C. Mansfield*-----	Oroville-----	June 24, 1919	Resigned Jan. 9, 1923
Harvey M. Toy-----	San Francisco-----	Jan. 9, 1923	Resigned Jan. 3, 1927
Louis Everding*-----	Arcata-----	Jan. 9, 1923	Resigned Jan. 17, 1927
Nelson T. Edwards-----	Orange-----	Jan. 10, 1923	Resigned Jan. 3, 1927
Ralph W. Bull-----	Eureka-----	Jan. 6, 1927	Resigned Jan. 6, 1931
J. P. Baumgartner*-----	Santa Ana-----	Jan. 6, 1927	Resigned Jan. 6, 1931
M. B. Harris*-----	Fresno-----	April 18, 1927	Resigned Jan. 6, 1931
Joseph N. Schenck-----	Los Angeles-----	Aug. 19, 1927	Resigned Jan. 6, 1931
Fred S. Moody*-----	San Francisco-----	Aug. 19, 1927	Resigned Jan. 6, 1931
Earl Lee Kelly-----	Redding-----	Jan. 6, 1931	Resigned Oct. 18, 1932
Frank A. Tetley*-----	Riverside-----	Jan. 6, 1931	Resigned July 31, 1935
Timothy A. Reardon-----	San Francisco-----	Jan. 6, 1931	Resigned May 7, 1936
Harry A. Hopkins-----	Taft-----	Jan. 6, 1931	Resigned Oct. 14, 1937
C. D. Hamilton*-----	Banning-----	Aug. 1, 1935	Died April 24, 1936
Dr. W. W. Barham-----	Yreka-----	Dec. 20, 1932	Resigned May 21, 1935
Ray Ingels-----	Ukiah-----	May 21, 1935	Resigned Oct. 4, 1935
H. R. Judah-----	Santa Cruz-----	May 7, 1926	Resigned Oct. 5, 1937
Philip A. Stanton*-----	Anaheim-----	Jan. 6, 1931	Resigned Mar. 3, 1939
Paul G. Jasper*-----	Fortuna-----	May 7, 1936	Resigned Mar. 3, 1939
William T. Hart-----	Carlsbad-----	July 7, 1936	Resigned Mar. 3, 1939
Robert S. Redington-----	Los Angeles-----	Oct. 5, 1937	Resigned Jan. 27, 1939
Frank W. Clark-----	Los Angeles-----	Jan. 27, 1939	Resigned Mar. 10, 1939
Lawrence Barrett-----	San Francisco-----	Mar. 3, 1939	Resigned Jan. 11, 1943
Iener W. Nielsen-----	Fresno-----	Mar. 3, 1939	Resigned Jan. 11, 1943
Amerigo Bozzani-----	Los Angeles-----	Mar. 3, 1939	Resigned Jan. 11, 1943
Bert L. Vaughn-----	Jacumba-----	Mar. 3, 1939	Resigned Jan. 11, 1943
L. G. Hitchcock-----	Santa Rosa-----	Mar. 10, 1939	Resigned Jan. 11, 1943
†Gordon H. Garland-----	Sacramento-----	Jan. 11, 1943	Resigned Sept. 14, 1943
†Mrs. Dora Shaw Heffner-----	Sacramento-----	Jan. 11, 1943	Resigned Sept. 14, 1943
†Miss Helen MacGregor-----	Sacramento-----	Jan. 11, 1943	Resigned Sept. 14, 1943
†Verne Scoggins-----	Sacramento-----	Jan. 11, 1943	Resigned Sept. 14, 1943
†William Sweigert-----	Sacramento-----	Jan. 11, 1943	Resigned Sept. 14, 1943

* Deceased.

† Member of the Interim Commission.



A SECTION OF REDWOOD HIGHWAY five miles north of Lanes Flat,
Mendocino County, U. S. 101

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

SECOND ANNUAL REPORT TO THE GOVERNOR
ON THE ACTIVITIES
OF THE DIVISION OF HIGHWAYS

FOR THE YEAR JULY 1, 1947, TO JUNE 30, 1948

HONORABLE EARL WARREN
Governor, State of California

DEAR GOVERNOR WARREN: In accordance with the provisions of the Collier-Burns Highway Act of 1947 amendments to Section 143 of the Streets and Highways Code it is my pleasure to submit to you the Second Annual Report of the Division of Highways, Department of Public Works, which presents the work and progress in development of State highways under my direction for the fiscal year July 1, 1947 to June 30, 1948.

The report, as prepared and submitted to me by the State Highway Engineer, discusses highway activities during the first year of operation under the Collier-Burns Act. It is a matter of considerable gratification to note the very definite progress accomplished during the year in advancing the enlarged highway construction program.

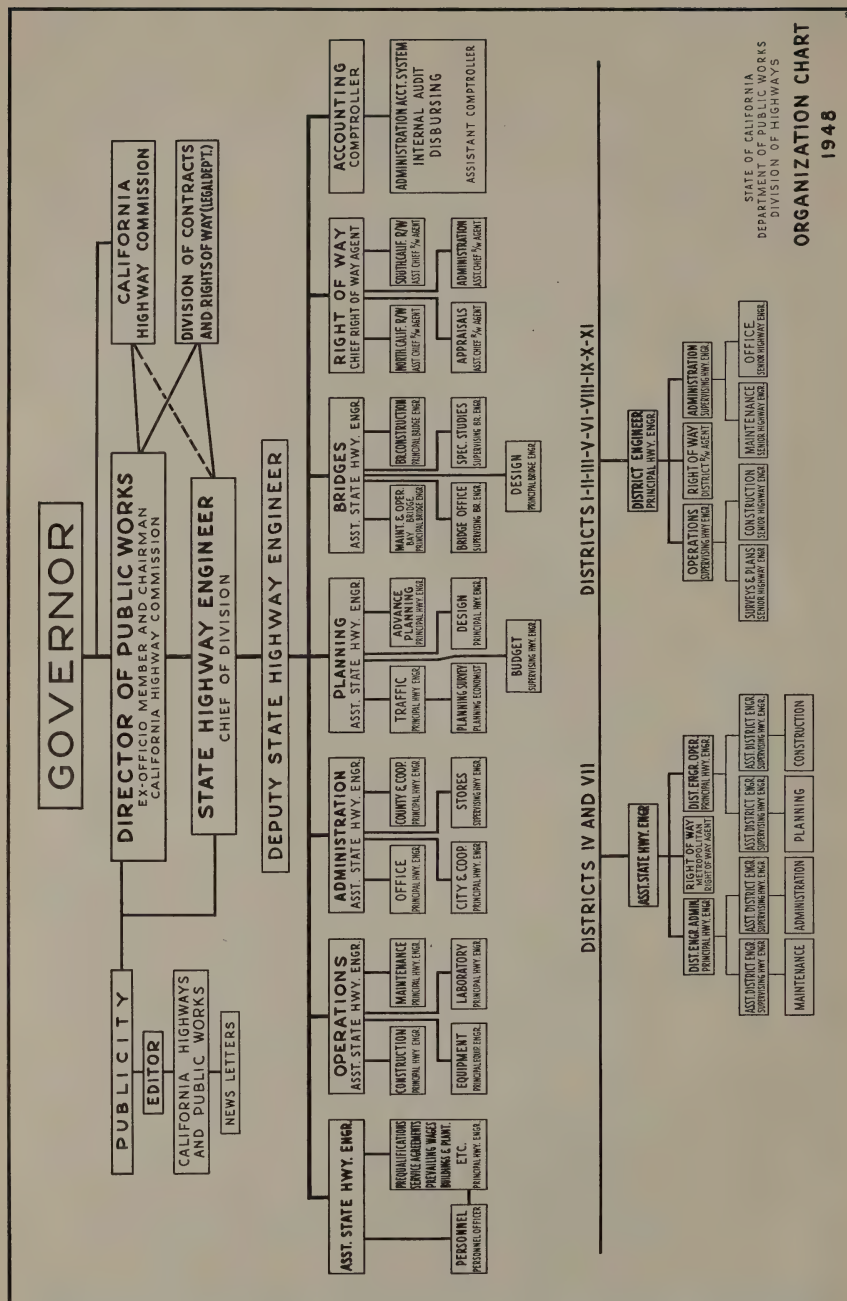
Of particular advantage has been the provision in the Collier-Burns legislation permitting award of highway contracts on or after April first preceding the beginning of the fiscal year in which such contracts are financed. With preliminary engineering and right of way acquisition for the year's program well advanced it was possible this last year to get the work under way early in the construction season with every assurance that the entire program will be under contract by the end of next March and the decks cleared for concentrating on the program for next year.

The report deals in detail with this progress in the various phases of highway administration and presents a complete discussion of the many problems arising in advancement of the highway program.

Respectfully,



Director of Public Works



SECOND ANNUAL REPORT BY THE STATE HIGHWAY ENGINEER

JULY 1, 1947, TO JUNE 30, 1948

HONORABLE CHARLES H. PURCELL
Director of Public Works
State of California

SIR: One year of state highway administration under provisions of the Collier-Burns Highway Act has been completed by the Division of Highways. While it has been a year of adjustment within the organization, it has, nevertheless, been a year of accomplishment.

The internal adjustments resulting from the administrative reorganization made necessary by the postwar expansion of the department have been effected smoothly and rapidly. After this first year of operation under the departmental reorganization it appears that increased efficiency is assured.

The better coordination accomplished between related phases of work through the single administration of such related functions has proven even more efficient than had been hoped for at the time of planning the reorganization.

The grouping of construction, maintenance, materials research, and equipment under one administrative head for "Operations" has definitely implemented progress of the department's work.

Administration of federal aid secondary funds allocated for county road improvement on the F. A. S. system; administration of state highway funds apportioned to cities; administration of the division's Stores Department; and the several administrative functions under direction of the Office Engineer, such as federal aid, engineering budget control, preparation of specifications and plans, advertising, bid opening and processing of contracts; all under the supervision of the Assistant State Highway Engineer, Administration, have been mutually benefited through the single executive control.

Probably no phase of the department's work has felt the impact of the reorganization nor benefited as much from it as the planning function. Grouped under one executive head, administration of those aspects of state highway work which precede construction are now more closely coordinated. With traffic data, advance planning information, and budget limitations correlated under the one function with geometric design, the rate of progress on preliminary engineering has been noticeably increased.

Similarly the combining of all bridge activities, including the operation and maintenance of the San Francisco-Oakland Bay Bridge, under the direction of an assistant state highway engineer has made possible coordination of all the division's bridge work upon a single level.

Personnel administration and contacts with contractors relative to prequalification for bidding has become more closely integrated with the other phases of the work through the reorganization, as have the extensive right of way operations of the department.

As various provisions of the Collier-Burns Act became operative upon different dates, the 1947-48 Fiscal Year cannot be considered as a complete year of operation under the act. Nevertheless, accomplishments have been gratifying. Progress in development of the State Highway System is indicated by the volume of contracts awarded during the year and the construction value of contracts under way at the end of the year. Between July 1, 1947, and June 30, 1948, 340 contracts were awarded for improvement to California highways. The construction value of these contracts totaled \$76,772,400, including the cost of construction engineering but not including right of way costs. In addition there were on June 30, 1947, outstanding calls for bids on 41 highway contracts, the estimated construction value of which amounted to \$10,570,000. A similar value for the 278 contracts under way on July 1, 1948 was \$90,682,800. This latter figure compares with a high for the year of \$96,961,000 on October 1, 1947, when 290 contracts were under way. It now appears that the volume of contract work which will be in force by October, 1948, will approximate in value the high reached in October, 1947.

The large volume of work accomplished during the year is further indicated by expenditures made between July 1, 1947, and June 30, 1948. In Appendix A of this report, the tabulation "Expenditures, Classified as to Function" on page 116 breaks down the total expenditures of \$124,500,000 to the various phases of the work. An examination of this tabulation shows that for actual road and bridge construction, including construction engineering, expenditures amounting to \$59,123,400 were made during the year. When there is added to this, the \$15,000,000 expended for right of way and \$5,500,000 expended for construction on state highway routes in cities the total of \$85,000,000 presents a representative value of the over-all construction expenditures for the year.

In the First Annual Report made to you a year ago, attention was particularly directed to the provision in the Collier-Burns Act permitting award of contracts any time after April 1st prior to the beginning of the fiscal year on July 1st in which such contracts are to be financed. The efficacy of this provision, which permits a running start on construction operations and gives advantage of the entire construction season, has been well demonstrated during this first year of operation under the act.

Last winter plans were so well advanced on projects included in the budget for the 1948-49 Fiscal Year that the department began calling for bids on February 6th, with the understanding that the contract award would not be made until April 1st.

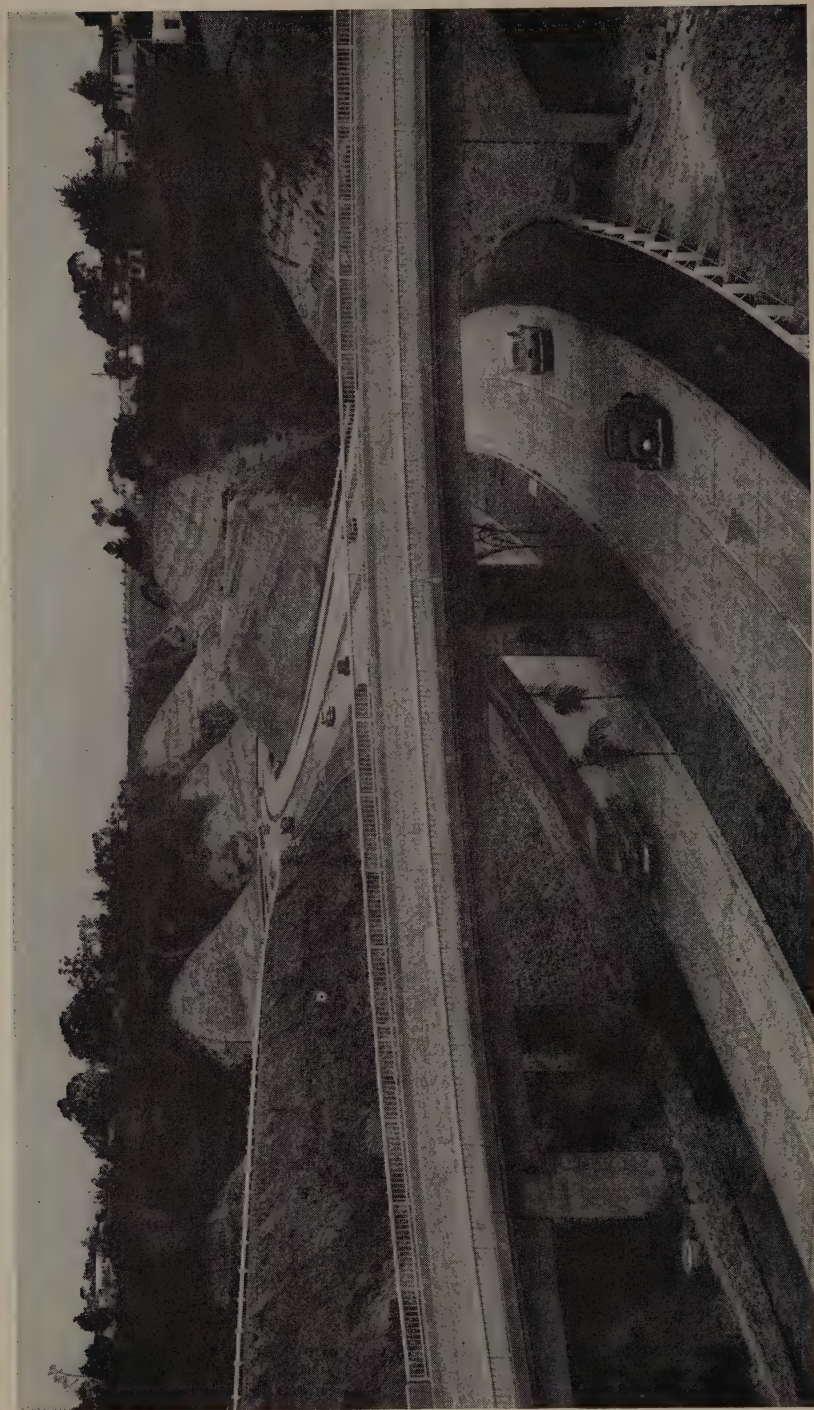
During the three months between April 1st and June 30th, 72 such contracts with a construction value of over \$27,000,000 were awarded. The schedule of advertising for bids was set at a rate of approximately \$2,000,000 per week. There is every evidence that this schedule will be maintained and it is anticipated that by the end of October at least 85 percent of contracts financed from the 1948-49 budget will be awarded and that the remainder of the year's program will be under contract before April 1, 1949.

This same procedure will be followed in putting under way the major construction projects included in the budget for the 1949-50 Fiscal Year. Progress on surveys, right of way acquisition and plan and specification preparation for projects included in the budget for the 1949-50 Fiscal Year has been such that a record equal to that being made for the 1948-49 budget is assured.

In the over-all picture of state highway construction progress in California, development of freeways within metropolitan areas stands out in bold relief. In the San Francisco Bay area reconstruction of the old undivided four-lane Bay Shore Highway leading down the peninsula from San Francisco steadily continues to bring additional portions of the route to complete freeway standards of divided roadways with cross traffic carried on structures over the freeway. In the East Bay area a great deal of progress is being made in construction of the East Shore Freeway; under contracts now going for grade-separation structures and road work the development of this freeway to 38th Street is in progress and projects now budgeted will carry construction to the south city limits of Oakland.

Construction placed under way since the end of the war and budgeted for the 1949-50 Fiscal Year for reconstruction to freeway standards of the Bay Shore Highway and its continuation south of San Jose totals 16 million dollars and a total amount of more than 8 million dollars represents the construction value of development of the East Shore Freeway budgeted and placed under way. These figures do not include right of way costs.

In metropolitan Los Angeles construction projects on the Hollywood Parkway are progressing rapidly. To date six contracts have been completed and twelve are now under way. The total construction value of these 18 contracts amounts to 10 million dollars. These contracts include 24 structures and nearly two miles of grading and paving. Contracts for grading and paving the Civic Center section of the parkway, that is from Spring Street to Hill Street, will be let this fall as will construction of the Santa Monica Boulevard and Normandie Avenue separations, and there is included in the budget for the 1949-50 Fiscal Year the sum of \$8,595,000 for grading and paving seven miles of the Parkway, identified for budgetary purposes as between Alameda Street and Highland Avenue. The total construction value of work completed, under way and budgeted for the Hollywood Parkway amounts to approximately 20 million dollars. This figure does not include right of way costs which will total another 20 million.



PASCOE STREET OVERCROSSING OF BALBOA PARKWAY IN SAN DIEGO

Construction of the Santa Ana Freeway is advancing at a rate parallel to development of the Hollywood Parkway. The Santa Ana Freeway will carry U. S. 101 southerly from Los Angeles. A total of 15 contracts have been completed on this freeway, three projects are now under construction and two are included in the budget for the 1949-50 Fiscal Year. The cost of the 18 completed and going contracts together with the two budgeted projects amounts to about 11 million dollars. The completed and going contracts include 13 grade separations and nearly five miles of grading and paving while the budgeted projects will provide for some 11.5 miles of additional development.

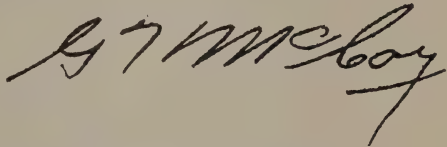
In the body of the report which follows this introduction the detailed statements on the work and progress of the Division of Highways have been arranged under headings of the principal functions as indicated on the organization chart although the actual administrative reorganization was in effect for only about eight months of the fiscal year.

Contract work awarded for the Division of Highways during the year July 1, 1947 to June 30, 1948, segregated by types and mileage, is shown in the first accompanying tabulation. The second tabulation shows the total miles in the State Highway System by types and by rural and urban highways.

The tabulation of average contract prices for major items of construction over the years appears in Appendix "D" at the end of the report. This tabulation has been expanded to some degree from that appearing in former reports to the end that it may be more representative of current construction practice. Prices for the items which are added in this report have been carried back to 1940 in order to furnish comparative figures over a period of years.

In the several appendices following the text of the report are given the important accounting and contract statistics.

Respectfully submitted,



State Highway Engineer and
Chief of the Division of Highways

CONTRACTS AWARDED BETWEEN JULY 1, 1947, AND JUNE 30, 1948

State Highway System

<i>Number of Contracts</i>	<i>Type</i>	<i>Miles</i>
15	Portland Cement Concrete-----	46.6
2	Asphalt Concrete -----	2.7
86	Plant Mix and Road Mix Surfacing-----	391.9
12	Bituminous Surface Treatment-----	70.5
5	Seal Coat -----	96.7
8	Grading -----	37.5
51	Traffic Signals and Lights-----	
47	Bridges -----	
59	Miscellaneous -----	
285	Totals -----	645.9

Not on State Highway System County Roads Federal Aid Secondary

13	Plant Mix and Road Mix Surfacing-----	86.0
6	Bituminous Surface Treatment -----	33.8
6	Seal Coat -----	26.7
6	Grading -----	35.1
18	Bridges -----	
49	Totals -----	181.6

State Institutions

2	Plant Mixed Surfacing -----	2.7
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State Parks

4	Bridges -----	
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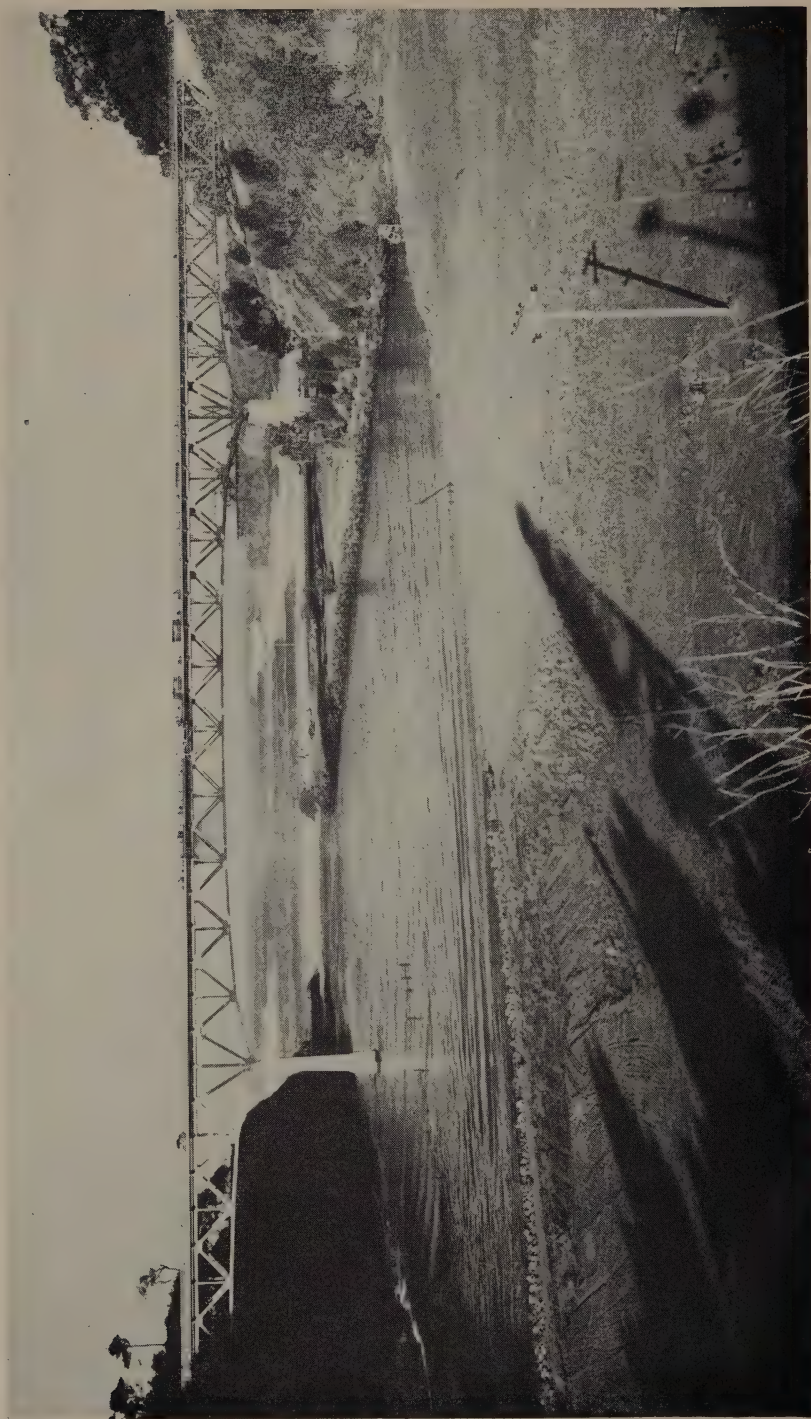
MILEAGES BY TYPES OF STATE HIGHWAYS
(Including Totals for Urban and Rural)
June 30, 1948

TYPE	NORTH			SOUTH			TOTALS		
	Outside cities	Inside cities	Total	Outside cities	Inside cities	Total	Outside cities	Inside cities	Grand Total
Portland cement concrete.....	4748.898	88.819	837.717	812.058	207.573	1,019.631	1,560.956	296.392	1,857.348
Asphalt concrete.....	401.378	169.002	570.380	409.502	233.670	643.172	810.880	402.672	1,213.552
Dual and combination types*	174.218	35.835	210.053	156.076	95.274	251.350	330.294	131.109	461.403
Bituminous macadam.....	397.212	32.208	429.420	214.364	60.982	275.346	611.576	93.190	704.766
Plant mix gravel.....	1,319.732	43.646	1,363.378	1,414.524	72.152	1,486.676	2,734.256	115.798	2,850.054
Road mix gravel.....	947.746	10.525	958.271	1,435.685	13.734	1,449.419	2,383.431	24.259	2,407.690
Oiled gravel.....	1,389.217	10.036	1,399.253	72.444	1.371	73.815	1,461.661	11.407	1,473.068
Gravel.....	9.968	0.132	10.100	-----	-----	-----	9.968	0.132	10.100
Oiled earth.....	1,147.640	4.060	1,151.700	1,163.636	6.792	1,170.428	2,311.276	10.852	2,322.128
Earth.....	233.898	-----	233.898	91.534	-----	91.534	325.432	-----	325.432
Bridges.....	60.845	11.156	72.001	29.912	5.909	35.821	90.757	17.065	107.822
No road.....	56.100	21.430	77.530	128.982	30.266	159.248	185.082	51.696	236.778
Totals.....	6,886.852	426.849	7,313.701	5,928.717	727.723	6,656.440	12,815.569	1,154.572	13,970.141

* Dual and combination types consist of two or more parallel types of surfacing.

† Includes 0.550 miles of brick.

NOTE: This table does not include non-add mileage such as outer highways, ramps, etc.



STEEL TRUSS BRIDGE across Noyo River on the coast near Ft. Bragg, Mendocino County

OPERATIONS

CONSTRUCTION

The increased cost of state highway construction in California since the close of World War II does not appear to be as great as that experienced for a like period following the end of World War I. The average current cost, which is approximately at the 1924 level, is in many items considerably under that of 1920.

At the close of the fiscal year the funds for construction under way totaled nearly \$91,000,000. Since February of this year bids have been opened for highway projects at a rate approximately \$2,000,000 per week. That construction may be continued at this rate is shown by a study of the bid openings during the past year in which it was found that the average number of bids received per project was 5.6, clearly indicating that there is still considerable leeway in the contractors' ability to undertake the large California highway program now under way.

Construction Practice

Grading—Greater emphasis is being placed on the selection of a better quality of material for the upper layers of the roadbed and in obtaining the proper compaction for stability. Quite often small percentages of cement are added to the native materials, usually by the road mix method, to overcome adverse qualities. This treatment is often considerably cheaper than importing high quality natural material from the nearest available source.

One such project calling for a depth of one foot of imported borrow of a specified quality was treated by the contractor at his own expense with 1 percent of cement at a cost of 30 cents per ton including the cost of the cement in order to use a material from a source more advantageous to operate than the one provided for the project.

Pavement Blankets—The repair program continues to be a very important item in construction expenditures. During the fiscal year a total of 315 miles of plant-mixed pavement blanket and shoulder improvement were constructed, which represents about $2\frac{1}{4}$ percent of the maintained mileage of state highways. These expenditures correspondingly reduce the amount of money available for new construction but this type of improvement is indispensable until the critical highway deficiencies have been corrected.

To ensure the successful performance of a pavement blanket, it is essential that the existing concrete slabs have an even bearing on the subgrade. Hot asphalt pumped under the pavement has been used exclusively for this purpose. This latter work has been performed by

maintenance forces in advance of the blanketing contract as the operation requires highly specialized equipment in which few contractors would care to invest.

Bituminous Surfaces—Plant-mixed construction was largely selected for bituminous surfaces and constituted about 70 percent of such surfaces laid. Continuous mixing is not overly favored by contractors and the conventional batch mixer continues to be the principal equipment used in the placing of bituminous surfaces.

Asphalt Concrete Pavements—This type of pavement has been almost entirely supplanted by plant-mixed surface construction. The tonnage laid for the year constitutes but 5 percent of the total plant-mixed output.

Portland Cement Concrete Pavements—In the construction of Portland cement concrete pavements, a more uniform surface appearance and a smoother riding pavement has resulted from the adoption of the unedged transverse joint with the forming strip left in the pavement. These joints have proven most satisfactory as they result in a better job with less labor and expense.

In the design of mixtures for concrete pavements greater stress is being placed on workability and less on strength. The questionable performance of some of the older pavements has cast considerable doubt on the advantages of high strength concrete for pavement construction.



RECENTLY COMPLETED FOUR-LANE DIVIDED SECTION OF RIDGE ROUTE
north of Castaic on U. S. 99, Los Angeles County



GRADING NEW HIGHWAY at Waddell Bluffs north of Santa Cruz



GRADING OPERATIONS FOR FREEWAY CONSTRUCTION ON U. S. 40
near Vallejo, Solano County



GRADING NEW HIGHWAY in Feather River Canyon near Rock Creek, Butte County

Project Reports, Plans and Specifications

Review of project reports, plans and specifications for proposed road construction by the Construction Engineer's staff prior to advertising for bids continues to ensure uniform construction practice on all state and federal aid secondary projects.

In matters of structural design, the construction engineer works closely with the engineer of design in order to incorporate the latest approved standards in highway foundations and surfaces.

Contractors' Claims

During the past fiscal year, eight claims by contractors in connection with completed work were submitted to the Board of Review for consideration and recommendation to the State Highway Engineer. Of these eight claims, five were settled by agreement, two await the contractor's acceptance of the State Highway Engineer's decision and one which was denied in its entirety is pending court action. There also are three claims from previous years still pending court action.

Prison Labor Projects

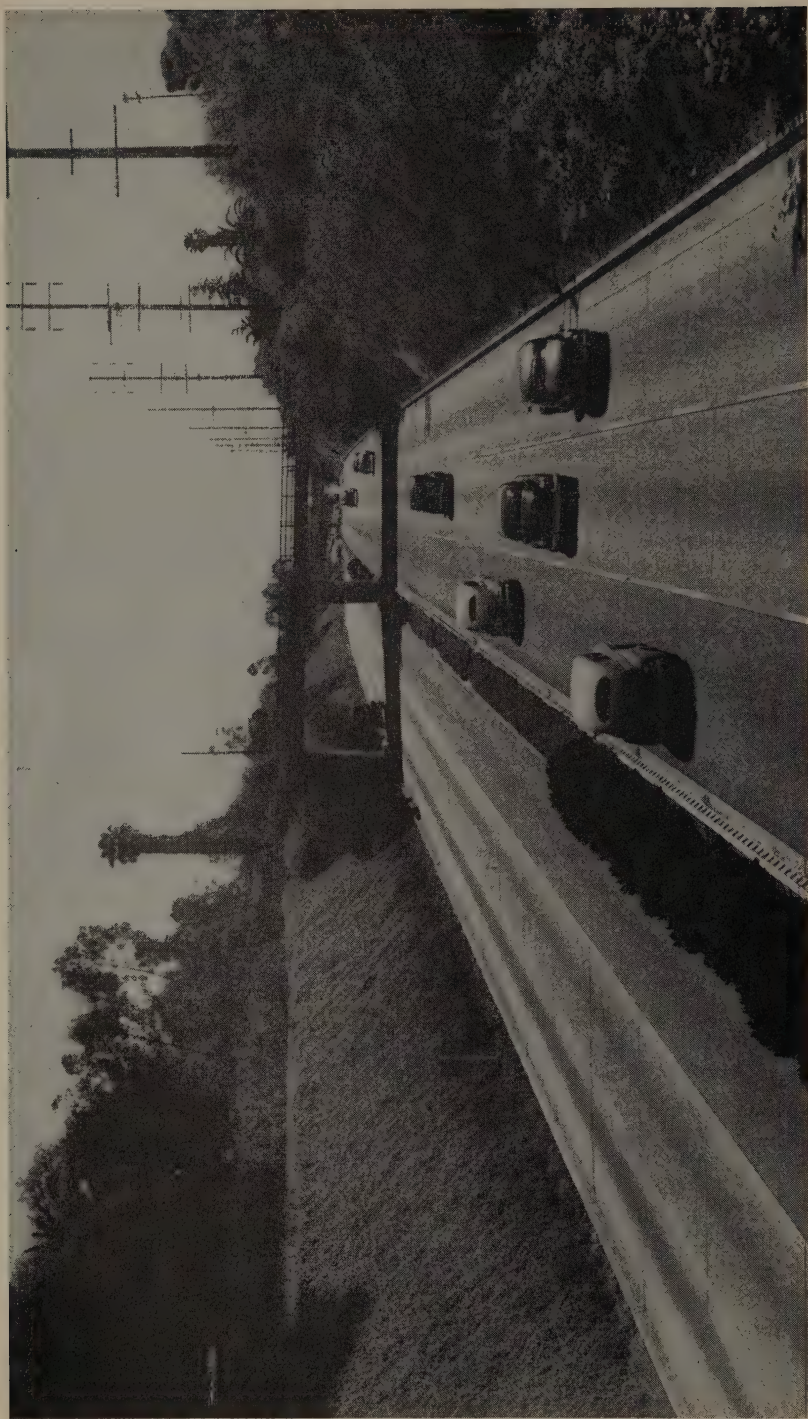
Four prison labor projects were in operation during the last year and preliminary work was started for the relocation of the camp in San Diego County. The camps in operation included the following: Camp No. 36 on the Trinity Lateral, in Trinity County; Camp No. 37 on the Angeles Crest Highway, in Los Angeles County; Camp No. 38 in San Diego County, on the new routing of the San Diego-Riverside Highway (U. S. 395); and Camp No. 39 in Modoc County, on the Alturas-Lakeview Highway.

The camp located in San Diego County is to be relocated on the San Diego-El Centro highway (U. S. 80) in the vicinity of Descanso and preliminary work at the campsite was started during the latter part of the fiscal year. This camp will be No. 40 and will be known as the Sweetwater Camp.

At the present location of the San Diego Camp No. 38, grading was completed by camp operations and a surfacing contract was completed permitting use by the public of a 19.6 mile length of new highway extending northerly from the City of Escondido toward Riverside.

The following tabulation shows camp locations and inmate quotas:

<i>Camp No.</i>	<i>Road</i>	<i>Location</i>	<i>Number as of</i>	
			<i>Inmates Quota</i>	<i>June 30, 1948</i>
36	I-Tri-20-C	Burnt Ranch -----	50	49
37	VII-L.A-61-C	Cedar Springs -----	100	93
38	XI-S.D-77-F,G	Moosa Canyon -----	75	75
39	II-Mod-73-A,B	Sugar Hill -----	50	48
Totals -----			275	265



A PORTION OF ARROYO SECO PARKWAY in Los Angeles

MAINTENANCE

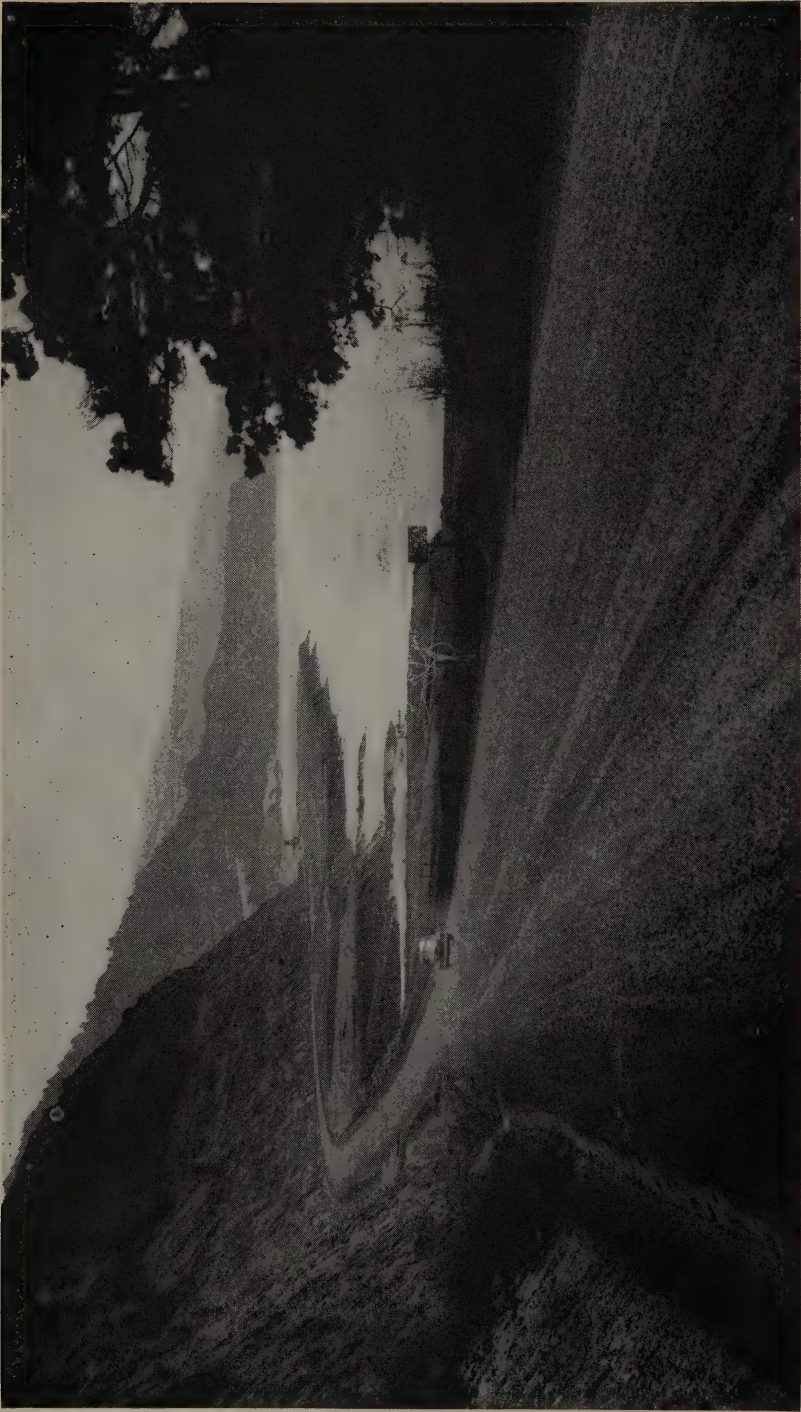
Maintenance of the state highways, during the past year, has been carried out with little change in organization. The statutory provision requiring the Division of State Highways to assume maintenance of state highway routes in cities has increased the mileage maintained by state forces by over 100 miles and the inclusion of Route 212 from Route 23 to the Nevada state line added 66 miles to the system for state maintenance. The remaining 32 miles on this route in Death Valley Monument is maintained by monument authorities. The completion of divided and multilane highways year by year has added to the area of surfacing to be maintained. The additional surfacing is now equivalent to a total of some 780 miles of two-lane pavement. This increase in work has been taken care of generally by adjustments within the organization. An average of about 2,320 men are now employed in the regular field forces.

The equipment situation has eased considerably throughout the year, principally as a result of replacement of practically all the older motor graders and many of the light maintenance trucks. The material situation has been fair, with the exception of metal for signs. Traffic lacquer was secured in reasonable quantities but its quality was poor, as certain gums and other ingredients were in short supply, necessitating the use of substitutes.

The cost of maintenance work increased about 10 percent as compared to the previous year. This reflects two increases in wages and rises in the cost of materials and supplies, particularly for such items as motor fuels and asphalts. The budget for maintenance was not increased to finance these changes, with the result that a reduction in the planned volume of work was necessary. The volume of traffic using the rural highways has increased at least 9 percent within the year, as shown by comparison of monthly counts, and truck traffic in timber areas especially has risen. The need of maintenance is aggravated also in some localities by heavy traffic incidental to hydroelectric and other industrial development. This combination of circumstances is reflected in a rising rate of depreciation on many sections of highway.

As reported last year, log and lumber hauling on some 1,200 to 1,500 miles of former secondary highways is a matter of especial concern. Information obtained from records of citations issued by the Highway Patrol indicates that overloading of log and lumber trucks still is a common practice. The average overload for 33 loads cited during July, 1947, in Humboldt County, for example, was 13,830 pounds with a maximum of 29,000 pounds for a single load. Similar records are on file for other areas. The base on most of these roads varies from the natural soil to possibly six or eight inches of imported material, and the surface from a penetration type bituminous treatment to perhaps four inches of roadmix or plantmix gravel. Shoulder widths are generally inadequate to provide support for the surface under heavily loaded trucks. It must be recognized that it is impossible to maintain such sections for logging trucks, and, furthermore, due to speed of truck traffic, a definite hazard exists for other traffic which must use these roads.

The lack of adequate parking for recreational traffic clear of the highways in snow-sports areas is a problem, particularly around commercial developments serving such areas. Development of off the high-



COMPLETED HIGHWAY at Waddell Bluffs north of Santa Cruz

way parking areas to further this type of commercial development is clearly not the responsibility of the Division of Highways. At such locations, maintenance forces are handicapped in their work and a definite hazard exists in winter months for both recreationists and through-traffic.

During the past year, sections of main line state highways have been closed to traffic from time to time by accidents involving some 14 tank trucks carrying petroleum materials such as gasoline and butane. The high center of gravity of these units evidently is a contributory factor; this type of truck represents a definite hazard on the road.

Maintenance Stations

The State's investment in maintenance stations is approximately \$2,800,000. Of this amount, some \$447,000 is for land and the balance is for buildings and other improvements.

Allocations for purchase of sites and for construction of improvements at maintenance stations approximated \$197,000 for the year. On the basis of present prices this program represents possibly less than 50 percent of the improvement accomplished for a similar amount in prewar years. These allocations, in general, were made to take care of locations where the need was immediately critical.

At the present time, 63 rented sites are being used by maintenance forces. This is a makeshift and expensive arrangement at best, as the facilities usually are not conveniently arranged and locations may not be central to the work. Some of the buildings used are fire hazards; also, the forces are subject to dispossession on short notice should the property be sold or the owner require it for other purposes. Improvements at state-owned stations are by no means complete. Equipment and supplies are stored in the open at many locations where housing is inadequate. This latter is especially true in the desert sections of the San Bernardino District. A more adequate long-range plan for acquisition of sites and improvement thereof, as well as for completion of present sites, should be developed.

Snow Removal and Sanding Slippery Pavements

The 1947-48 season of snow removal work extended from October 10, 1947, when the first storms blocked the mountain passes, to June 21, 1948, when the Tioga Pass Route was reopened, making a total of 254 days. Allotments made for the work totaled \$826,075, which is the largest amount ever required for this type of work during a single season. In a normal year, the first heavy storms are expected about November 15th and no great amount of work is anticipated after the end of March. The early season made it necessary to assemble crews and equipment and standby charges accrued from that time through February. The greater part of the season's snowfall occurred during March and April, and opening of mountain passes extended into June. While the winter season was open, the rainfall and low temperatures in the northern part of the State and along the coast caused slippery pavement conditions and considerable increase in expense for sanding as compared to a normal season.

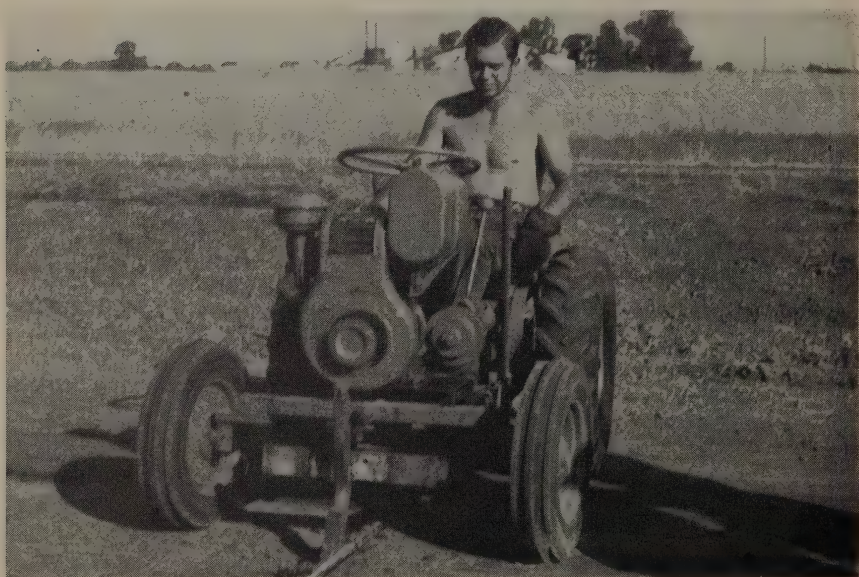
Major Slides and Storm Damage Repair

The allocation of funds for removal of major slides and repair of storm damage for the 99th Fiscal Year totaled \$1,019,755. This compares with an average cost of \$1,235,000 per year over a five-year period. While the rainfall in the Redwood Highway area, where about one-third of such expenditures occur, was above normal, the storms were so distributed that the ground did not become heavily saturated and slides and slipouts did not develop to the usual degree. Except for one slipout north of Trinidad and washouts near Salyer on the Trinity River and at Seiad on the Klamath River, highways were closed at only a few points and then only for short periods while maintenance crews were clearing a passage.

Surface Repair

The maintenance oiling program for the 1947 season required repair work on some 1,800 miles of traveled way and 700 miles of shoulders at a cost approximating 2 million dollars.

This seasonal repair work is the mainstay for upkeep of the traveled way. The patrol crews work throughout the year, of course, to patch holes and small areas in the highway surface as soon as failures develop. This latter type of work, however, can take care only of the emergency repairs and planned seasonal work is undertaken when extensive areas become dried out and require reprocessing by addition of asphalt and reworking or sealing of the surface. For the higher type surfaces, base repair and repair of the surface by placing approximately an inch thickness of plantmix surfacing is undertaken to provide a leveling course and additional support for traffic. An indication of the pro-



SELF-PROPELLED PAVEMENT JOINT CLEANER, chisel type



TERMINAL ISLAND OVERCROSSING OF U. S. 101 ALTERNATE near Long Beach

gressive deterioration of the surfacing may be noted in the fact that the 1948 program for this work requires some \$2,600,000, as compared to the \$2,000,000 program of last season.

Bridge Repairs

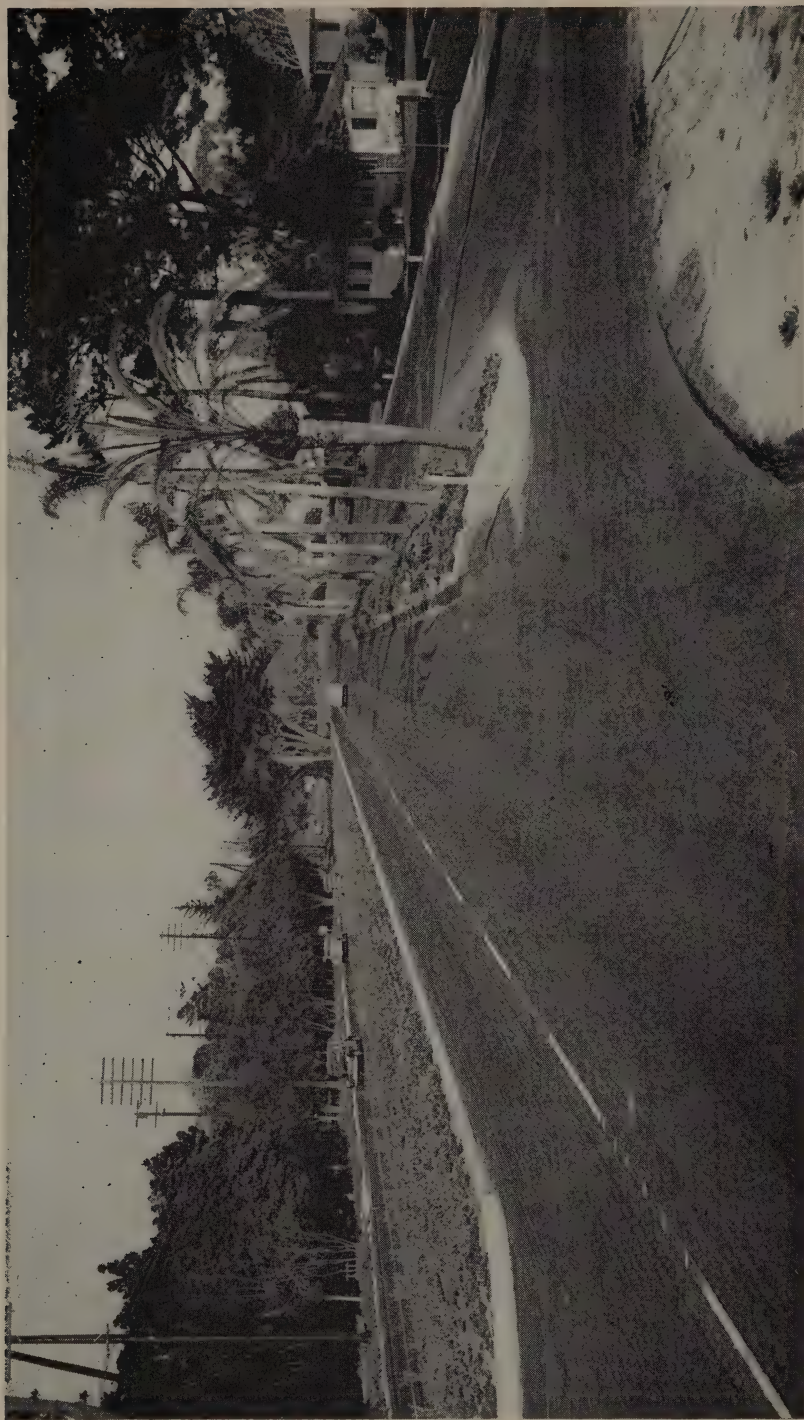
During the 1947-48 Fiscal Year the sum of \$325,000 was allocated for repair and painting of some 300 bridges, including about \$95,000 for painting nine steel bridges.

Even with this upkeep program and an extensive bridge construction program there were still a total of 291 posted bridges on the State Highway System as of June 30, 1948. Of this total, 169 bridges were posted for load or load and speed restrictions and the balance for speed only. As of June 30, 1947, there were 329 posted bridges.

Maintenance of State Highways in Cities

Under provisions of the Collier-Burns Act which became operative January 1, 1948, the Division of Highways was charged with the direct responsibility for maintenance and upkeep of 1,092 miles of state highway in 269 of California's incorporated cities at an estimated annual cost of some \$3,500,000.

The department was not equipped or staffed to directly perform the many phases of maintenance required nor to provide the services necessary for the regulation and control of traffic in all cities. The acute situation was, however, successfully overcome by delegating a considerable portion of the work to the cities as provided for under Section 130 of the Streets and Highways Code. The cooperation extended by the cities during the initial six months period was the primary factor in the success secured in handling the many new and different maintenance problems peculiar to urban highways.



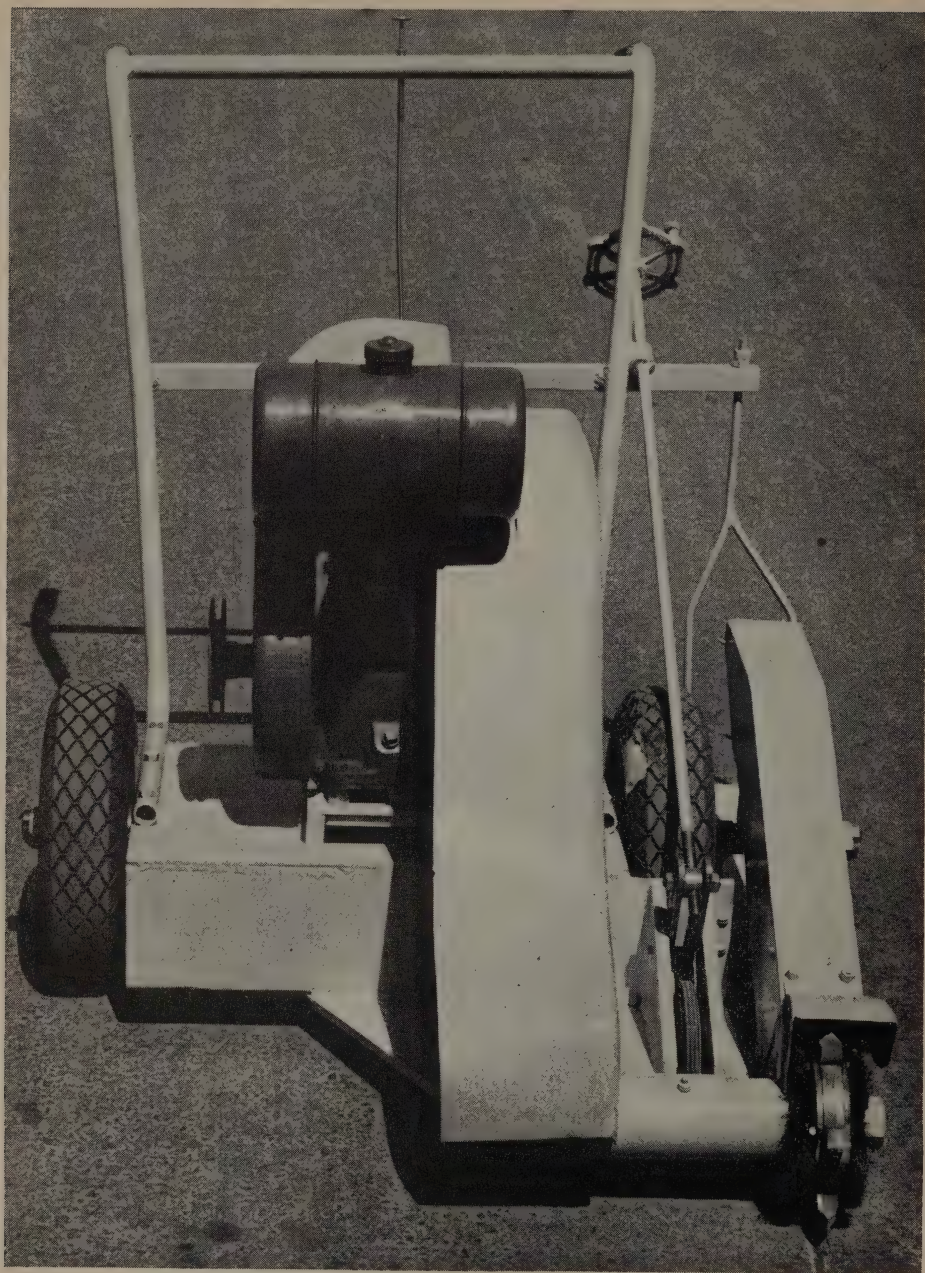
RECENTLY COMPLETED FREEWAY south of Santa Barbara, showing outer highway design

In general, the agreements for maintenance negotiated with the cities did not contemplate nor provide for a standard of maintenance outside of that normally performed by the particular city. It was necessary, however, to impose certain limitations consistent with policy and available funds. For example, the cost of traffic signal operation and upkeep was shared with the city on the basis of the number of signal heads at an intersection controlling highway traffic. Street cleaning, handling of debris or sweepings from private property was excluded as a maintenance obligation. For purpose of budgetary control, a maximum expenditure per mile was established for each route. This latter restriction was particularly difficult to determine because of the general lack of data obtainable from the cities and to nonuniformity of available cost records for comparable work. Sweeping and cleaning costs which are a major expense item in connection with urban maintenance were found to vary considerably depending on established sweeping schedules and not necessarily on a basis of actual need.

The overlapping of work between the cities and department is such that it is not possible to state the lengths maintained by each agency. Routine traveled way maintenance by city forces involved 627 miles as compared to 465 miles by the department. Sweeping was largely done by the cities while traffic striping, blanketing and seals were more frequently performed by the State.

Joint and Crack Filling of Concrete Pavements

Experimental work in connection with maintenance of expansion and construction joints was continued during the fall and early winter season. It has been realized for some time that the mixture of 31-40 penetration air-blown asphalt and SC6 liquid asphalt was not entirely satisfactory for crack filling. The joints were not tightly sealed during cold weather and there was a tendency for the material to soften and track the pavement or run out of the joints in hot weather. Experimental work, using different mixtures and types of material for crack fillers, has been under way in cooperation with the Materials and Research Laboratory for several years. Two types of material—one an asphalt latex emulsion and the second a commercial compound containing rubber—have given the most promising results. The asphalt latex emulsion costs about \$320 per ton and heating to about 80 degrees F. is required to soften it sufficiently for pouring. The commercial rubber compound costs about \$265 per ton and requires special equipment and experienced operators for its application. The mixing and heating to 450 degrees F. of the latter compound must be accurately controlled as the material can be damaged by overheating or if subjected to prolonged heating. Cleaning and filling joints in concrete pavements with the methods and materials now under test may prove too costly in comparison with the present but less satisfactory practice. However, plans are in process to let two crack filling projects to contract in order to accumulate data and experience along this line. The annual crack filling program on approximately 1,600 miles of concrete pavement requires an expenditure of from \$75,000 to \$100,000. If the methods of maintaining concrete pavements are to be changed, there must be assurance that the benefits through more definite seal of the joints and length of service life of the materials justify the change.



PAVEMENT JOINT CLEANER, wheel type

Subsealing Concrete Pavement

The methods and materials used for subsealing concrete pavement as discussed in the first annual report have not been changed. A considerable saving in the cost of drilling holes is now in effect by use of an outrigger arm attachment developed by an equipment manufacturer, which carries the jack-hammer and is operated from the truck or trailer carrying the compressor unit. This arrangement is much easier on the operator and has halved the cost of drilling holes. A special nozzle equipped with a metal ball and spring arrangement to shut off the flow of asphalt when a hole is filled has been developed for this work. The cost of the completed work has been reduced to about \$2.50 per hole. Approximately \$180,000 was allocated for subsealing work during the past fiscal year.

Maintenance and Control of Roadside Vegetation

The control of roadside vegetation, either to reduce fire hazard, control noxious weeds, or for the clearance of signs and guard rail, together with the care of trees in landscaped areas required an expenditure in excess of \$700,000 during the year.

Traffic Striping

Traffic striping including work on state highway routes in cities required an allocation of some \$460,000 during the year. About 11,400 miles or approximately 83 percent of the system is striped.

Traffic lacquer was in reasonable supply during most of the year. In order to insure this supply, however, it was necessary to adjust specifications to conform to the availability of raw materials. This resulted in a product which had a relatively short service life with considerable expense for restriping on that account.

This situation, however, is improving somewhat and it is believed that better material and service will result.

Warning and Directional Signs

The work of maintaining road signs, which was taken over from Automobile Club forces as of January 1947, and undertaken by maintenance forces, was well organized by July 1st, with 15 men and special trucks. There was a considerable backlog of work, however, due to deferred maintenance and replacement of temporary signs used during the war years, as well as installation of new signs required as part of the expanded construction program.

Sign manufacturers had difficulty in obtaining sufficient quantities of metal to meet the demand and there were several months delay in many instances in securing delivery of signs. In order to bring the work up to date it was necessary to use regular maintenance forces to some extent to supplement the work of the regular sign crews.

A total of approximately \$205,000 was expended on this work during the year, of which about \$100,000 was required for replacement and maintenance of existing signs.

Traffic Signals

The installation of signals to control traffic at important intersections has progressed rapidly during the year. The maintenance of these

facilities requires well organized and equipped crews with specialized experience, particularly in both the San Francisco Bay and Los Angeles areas.

The present signal maintenance organization in the Los Angeles district consists of a force of 14 men equipped with three pickup trucks with 14-foot ladders, a one and one-half ton ladder truck, and one pickup truck with special equipment for relamping. All equipment except the one and one-half ton ladder truck is equipped with two-way radio. This organization is set up to provide service 16 hours per day, seven days a week. Patrol service only is provided from 4 p.m. to midnight with one ladder truck. On Saturdays, Sundays and holidays, two ladder trucks are used in patrol from 7:30 a.m. to 4 p.m.

In the San Francisco district the signal maintenance crew also handles upkeep of the electrical installations in the Waldo and Broadway Low Level tunnels, as well as roadway and intersection lights. A crew of 13 men is assigned to this work with a 30-foot tower truck, two ladder trucks, and two pickups. The service required is similar to that in the Los Angeles areas.

Outdoor Advertising Act

The work of administration under the Outdoor Advertising Act has shown the greatest increase for any single year since the act went into effect in 1933, as indicated by comparison of figures for the last three years, as follows:

Number of operators licensed during fiscal year:

1945-46	-----	388
1946-47	-----	534
1947-48	-----	780

Number of permits issued and gross receipts during calendar year:

Year	Signs	Structures	Gross receipts
1945	329	17,116	\$32,079
1946	731	18,793	40,502
1947	413	21,143	52,252

The two additional inspectors reported in the first annual report have been of considerable assistance in handling the increased volume of work and have made it possible to give a better state-wide coverage. One permanent clerical position was added during the year.

Radio Communication

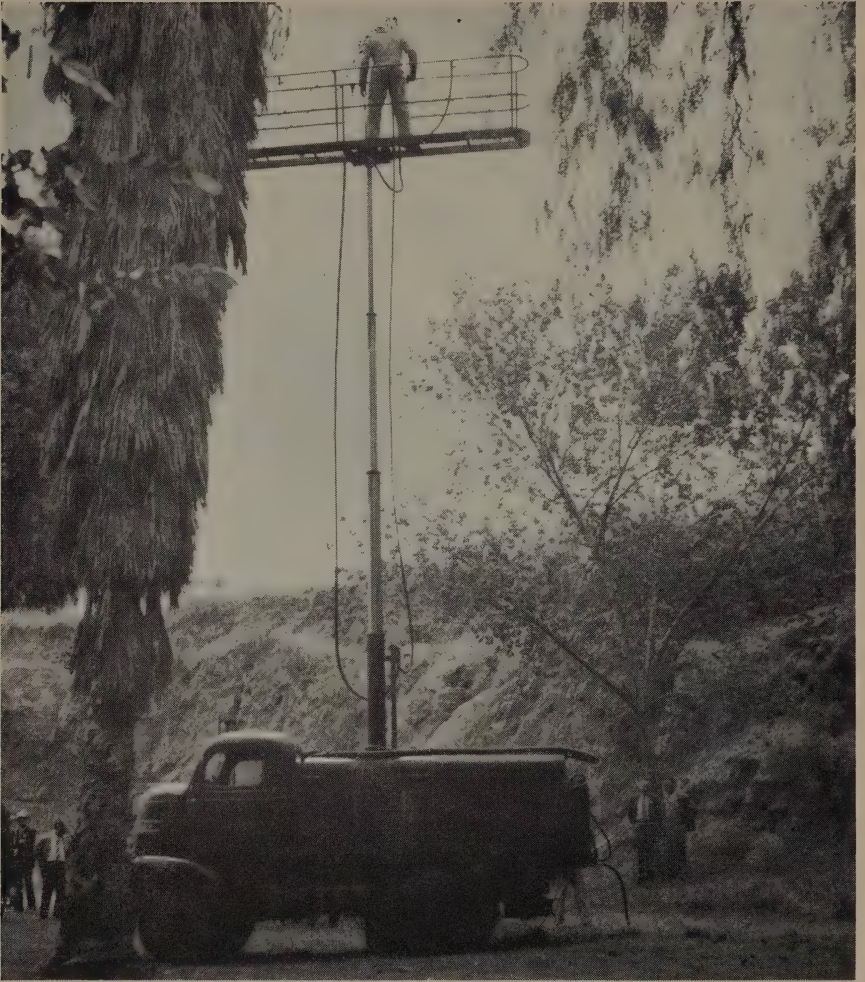
The use of radio communication as an aid in highway work has almost doubled within the past year. This increase was made possible by the Federal Communications Commission assigning a separate radio service classed as "Highway Maintenance," and broadening the rules and regulations concerning its use. This places highway radio on a par with other governmental agencies such as police, fire and forestry and permits a more general usage of radio and justifies expansion of the service. This increase has resulted in a necessary reorganization of the personnel comprising the radio organization to adequately handle and administer the radio work. There is presently employed a full time radio administrator in charge of the radio communication system, under whom



TRUCK MOUNTED MOWER for roadside maintenance



TRAILER TYPE WEED BURNER



TELESCOPING TREE TRIMMING TOWER

is an office assistant, a supervising radio technician, and two senior radio technicians. The equipment in the field is maintained by four district radio technicians.

A carefully planned two-year interim radio program utilizing war surplus radio equipment at a savings of many thousands of dollars to the State was developed for the Division of Highways in cooperation with the Division of Communications, Department of Finance. This program involved overhauling the old low frequency radio equipment and extension of the system. There are now installed and operating 40 land radio stations, 87 mobile and portable radio stations and four radio repeater stations for a total of 131 radio stations. This figure compares to 26 land radio stations and 52 mobile radio stations or a total of 78

radio stations in operation a year ago. The system still operates on a low frequency of 2726 Kc with the exception of District I where the mobile units are operating on a frequency of 37.98 Mc-(FM) and the repeater stations on 72.10 Mc-(FM), and in District VII where stations are on the Highway Patrol low frequencies.

The Federal Communications Commission has recently assigned to Highway Maintenance 34 FM radio frequencies in the VHF (very high frequency) radio spectrum. This assignment has deleted the low frequency assignment of 2726 Kc and stipulates that all highway maintenance radio stations must be operating in the VHF bands by July, 1950. Plans are under way for changing over the present obsolete low frequency system to the new VHF by that date in the seven Districts now utilizing radio. The installation of the new equipment will be carefully planned to give the Division of Highways one of the finest land-mobile radio communication systems in the west.

Permits

Administration work connected with issuance of permits for movement of oversize loads and for work or encroachment on the highway right of way has continued at a high rate with an increase of nearly 13 percent over the number of permits issued as compared to the previous year.

Number of Permits Issued

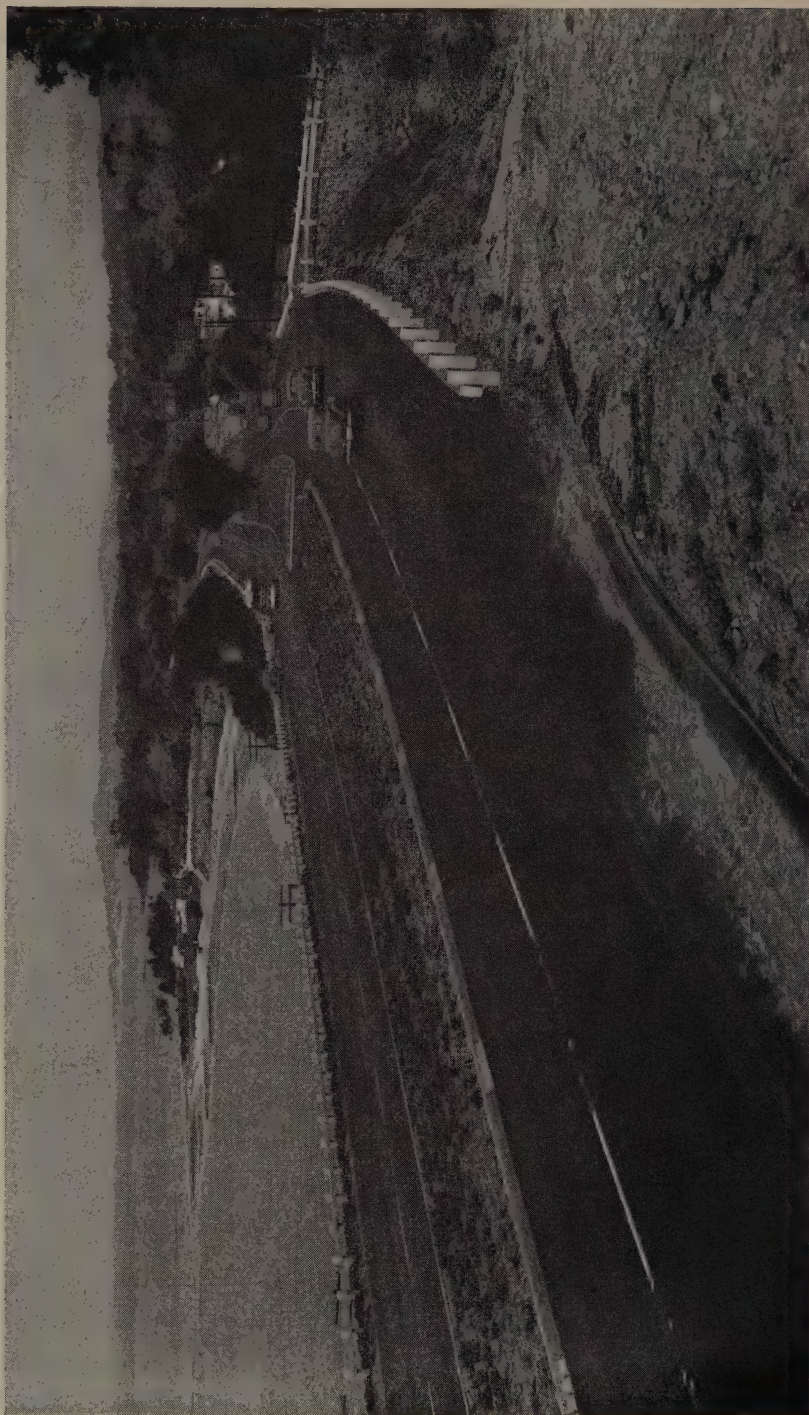
	<i>Year ending June 30, 1947</i>	<i>Year ending June 30, 1948</i>
Transportation permits -----	20,663	23,197
Encroachment permits -----	14,003	14,907
	<hr/> 34,666	<hr/> 38,104

In general the transportation permits represent such items as movement of oversize equipment, including tractors with bulldozers, carry-all scrapers and power shovels which are handled by concerns especially equipped and experienced in this type of hauling. There has also been a considerable movement of buildings as a result of sale of surplus property at military establishments and other adjustments due to the housing situation. The main concern in handling requests for these moves is to make sure that the equipment used is adequate, that loadings will not endanger structures or road surfaces, and that traffic is protected from hazard or undue inconvenience.

The encroachment permits authorize installation and maintenance of utilities, construction of approaches to private property, etc. The policy relating to encroachments on freeways was reviewed and restated during the year. Special attention is given to plans for utilities proposed for such sections of highways either to restrict the installations or to make sure that its future maintenance will cause a minimum disturbance of the highway facilities and to eliminate future interference with traffic.

Damage by War Traffic

Under provisions of the Defense Highway Act of 1941, as amended by Public Law No. 146, approved July 13, 1943, 58 claims in a total amount of \$2,302,635.12 have been filed with the Public Roads Administration. These claims cover cost of repairing damage by war-caused traffic on state highways throughout the State. Payments received to



RECENTLY COMPLETED FREEWAY south of Santa Barbara, U. S. 101

date amount to \$651,293.28 and cover settlement of 35 claims, representing an allowance of 78.92 percent of the original amount claimed. The amount disallowed was ruled by the federal engineers to be either for betterment or was due to lack of records substantiating the claim of war related traffic. Only one claim in the amount of \$72,518.48 has been rejected. It was impossible to obtain records required by federal auditors showing war use.

MATERIALS AND RESEARCH

As in all other departments the volume of routine work of the Materials and Research Laboratory has kept pace with the design, construction and maintenance activities of the Division of Highways.

In addition, the laboratory has engaged in foundation investigations for the Division of Architecture in connection with the state building program. This included such projects as the State Capitol Extension, and the District IV Office Building in San Francisco.

Considerable work is under way testing soils for the San Francisco Bay Toll Crossings Division in connection with the foundation investigations for proposed new Toll Bridge Crossings. On this work the foundation drill rig now is engaged in making borings for foundation studies north and south of the estuary between Oakland and Alameda.

In addition to the continuance of the long time studies on the research projects reported last year, preliminary work has been done on several new projects including a one mile section of reinforced concrete pavement to be constructed in Solano County in the vicinity of Fairfield.

Cooperative studies are under way with various national societies and committees in connection with:

1. The development of a standard test procedure for determining the bleeding or water-gain characteristics of concrete resulting from supplementary water added to secure workability of the mixture.
2. Methods for determining the rate of curing of liquid asphalts.
3. Compressive and flexural strength of mortars as an indication of the flexural strength of concrete.
4. Investigation of the properties of puzzolanic additions for correcting cement-aggregate reaction properties.
5. American Society for Testing Materials Sponsoring Committee on Blended Cements.

All of the research projects listed in the First Annual Report have been active, and several progress reports have been compiled.

Although most research is in the long time study class, observations during early periods afford information of value which is put to immediate use without waiting for the final summary of conclusions. For instance:

- a. Advance data from studies of effects of various air entraining agents on the volume change, strength, and durability of concrete have demonstrated the advantages of air entraining agents for

certain construction and weathering conditions as well as established the controls which must be exercised in design and use to attain the ends sought.

- b. Studies of initial concrete temperatures developed under different curing conditions have demonstrated marked advantages in the use of light colored impervious membranes as compared with the darker colored whenever this type of cure is permitted as a substitute for water cure.
- c. Measurements of pavement deflections under heavy loads on the three concrete pavement test sections in Merced, San Diego and Ventura Counties have furnished valuable evidence of the value of certain materials and procedures in the construction of unyielding subgrade under pavement bases.
- d. Volume change measurements at expansion and weakened plane joints on the concrete pavement projects listed under (c) have developed some interesting and valuable data justifying certain changes in design and construction of benefit to the long time service of concrete pavements.
- e. Periodical observations of the performance of the numerous cement-treated base projects have demonstrated not only the benefits of this type of construction, as related to certain pavement and traffic conditions, but likewise ways in which economies can be effected in pavement design and construction and at the same time improve the long time performance.
- f. Studies of bituminous binders and bituminous construction have resulted in specification revisions designed to improve the life of bituminous surfacings.
- g. Studies of traffic line paint formulations have resulted in securing an improved product at a lower cost. These studies are continuing in an effort to effect further reductions in drying time and in cost without sacrificing quality.
- h. As a result of tests started a number of years ago specifications have been developed for the preservative treatment of Douglas Fir as a substitute for untreated redwood. Studies of the performance of such treated material under all conditions of weathering are being continued.
- i. The number of years of comparative studies on soil mechanics and the behavior of soils and untreated materials for pavement bases and foundations have led to the development of design charts and testing procedures permitting the more accurate determination of pavement thickness and strength required to carry traffic. The results of this study are now being utilized on a trial basis by the Division of Highways. Work is under way seeking to develop rapid indicator tests to speed up field control tests which are necessary during construction.
- j. Much other investigational work has been carried on, not all productive of answers to the problems being investigated but very few which are not productive of some information of value, either for the improvement of current procedure or avoidance of more expensive but less effective methods. The last remark applies particularly to the large number of expensive commercial prod-

ucts on the market under some trade name, the apparently beneficial aspects of which are usually found to be attained through the incorporation of some standard well known cheap ingredient to which some coloring matter and/or extenders have been added which add very little, if at all, to the quality of the product.

EQUIPMENT

Policies of the administration of state-owned equipment under the supervision of the Equipment Engineer have remained unchanged under the reorganization of the Division of Highways which placed the Equipment Department under the function of "Operations." The duties of passing on all requests for both replacement and additional units of rental equipment, purchasing, caring for their disposition, and providing for their maintenance have continued on the same basis as has been in effect since the equipment department was originated.

Organization

At the department's main shop in Sacramento, where the Equipment Engineer maintains his headquarters and staff, a repair force is employed which cares for not only the general work of the division but looks after upkeep and rental of equipment for Districts III and X in Marysville and Stockton, neither one of which has repair facilities of its own.

During the past fiscal year, chiefly because of the unavailability of certain types of equipment, the production force at Headquarters Shop has been employed for a considerable part of its time in constructing special units for the Division of Highways and other state departments. At the several district shops, an office and production force is employed which with all necessary facilities is under the immediate supervision of a Superintendent of Equipment. These forces care for all equipment in their respective districts.

As of June 30, 1948, the book value of all highway rental equipment amounted to \$11,108,798.85; this is apportioned to the various district shops in accordance with the following tabulation:

<i>Shop No.</i>	<i>Location</i>	<i>Square feet covered space in shop</i>	<i>Inventory value of rental equipment</i>
Hdqrs.			
Shop	Sacramento -----	60,072	\$604,607.44
1	Eureka -----	24,567	1,075,965.09
2	Redding -----	21,108	1,723,478.17
*3	Marysville -----	None	941,264.24
4	San Francisco -----	18,040	831,545.13
5	San Luis Obispo -----	12,737	665,659.92
6	Fresno -----	16,620	911,795.54
7	North Hollywood -----	24,931	1,308,402.02
8	San Bernardino -----	12,321	870,465.07
9	Bishop -----	15,776	584,103.44
*10	Stockton -----	None	849,276.81
11	San Diego -----	18,045	742,235.98

* Equipment repaired at Headquarter's Shop.

Rentals

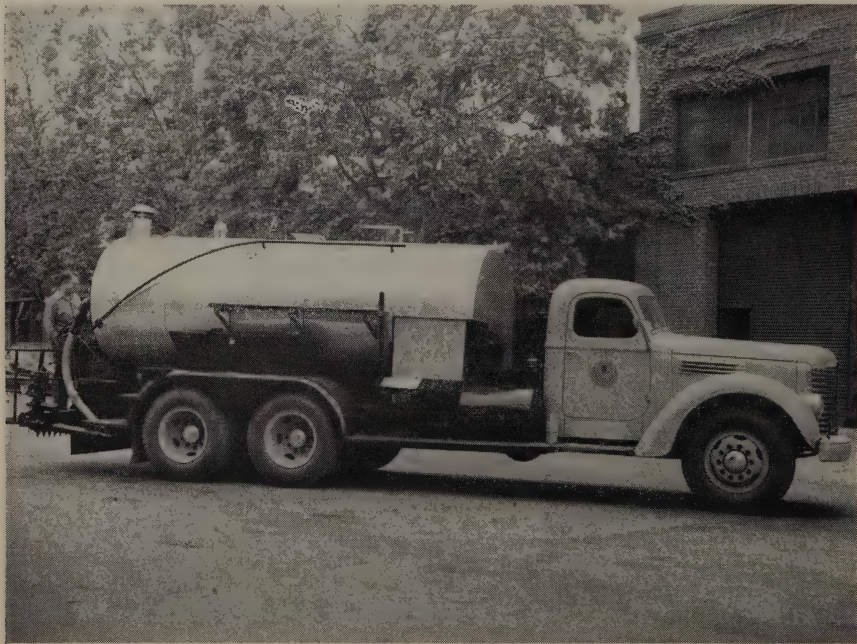
Because very few replacements were possible during World War II, much of the presently owned equipment has served far beyond its economical life, resulting in much higher upkeep costs than would normally be expected. This condition, aggravated by increased expenditures for necessary repair parts, difficulty in their procurement, and higher labor costs, has made for an increase in costs which in some instances exceeds the rental income by as much as 45 percent. Since before the war there has been only one 15 percent blanket increase in rental rates.

Considering these conditions, and bearing in mind the effect of the extended use of equipment under currently higher repair costs, it appears essential that the present schedule be increased so as to maintain the equipment rental system on a sound financial basis. Preliminary studies of the situation indicate that there should be an average increase of about 30 percent over the rates in force on June 30, 1948.

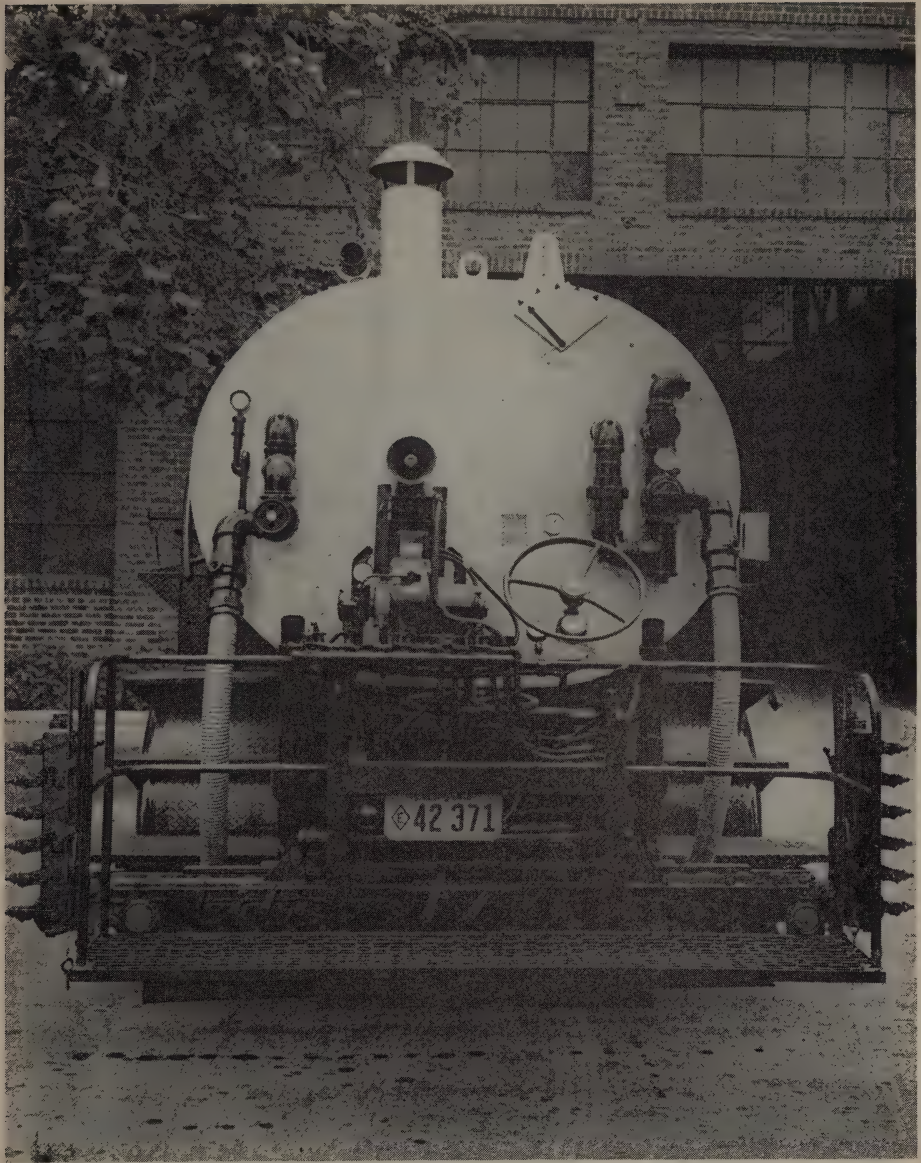
Disposal of Obsolete Equipment

The practice of disposing of all replaced or obsolete equipment through the medium of procuring competitive bids is being continued. The only exceptions to this procedure are units sold to local governmental agencies of the State. During the year rental equipment which originally cost the State \$1,479,679.32 has been sold for \$520,575.50, or a recovery of over 35 percent of its original value. The high return secured results chiefly from the non-availability of new equipment. It is thought that a peak was reached in such disposal during the past fiscal year, and that hereafter a decline in the amount of sales may be expected.

Equipment sold to other governmental agencies of the State is usually purchased by counties of limited means who, while needing the



OIL DISTRIBUTING TRUCK built in Headquarters Shop



REAR VIEW OF OIL DISTRIBUTING TRUCK built in Headquarters Shop

units, are unable to buy them new. While the amount of such sales is less than 10 percent of the total equipment sold, it is felt this outlet provides the means to effect badly needed county road improvements.

New Equipment

The production force at Headquarters Shop has constructed many units containing features not included on commercially distributed equipment such as:



SOUTHERN PACIFIC R. R. UNDERPASS near Auburn, Placer County



STEEL GIRDER BRIDGE across Scott Creek, Lake County

A portable sampling and drilling rig with a 15-foot demountable derrick. The rig is integral with the one-ton power wagon on which it is built; it has an eight-inch split bucket drilling attachment capable of taking earth samples to a depth of 50 feet; the multiple speed controls are located within easy reach of the operator and the operating power of the rig is supplied by the truck's engine.

Five 2,000-gallon road oil distributors were built on three axle, two axle drive, truck chassis. These units embody a number of special features, the principal ones being a folding box-type 12-foot adjustable distributor boot carrying oil nozzles at four inch intervals and positive heating control.

Financial

The accompanying statement briefly shows results of the department's operations for the 12 months from July 1, 1947 to June 30, 1948. It indicates an excess income over expenses of \$103,840.13 (Item No. 21). This profit, as that made in the previous year, was the result of abnormal conditions, and it seems certain that under average circumstances last year's operation would have resulted in a deficit.

Consolidated Statement of Shop Operations—July 1, 1947, to June 30, 1948

Equipment Administration

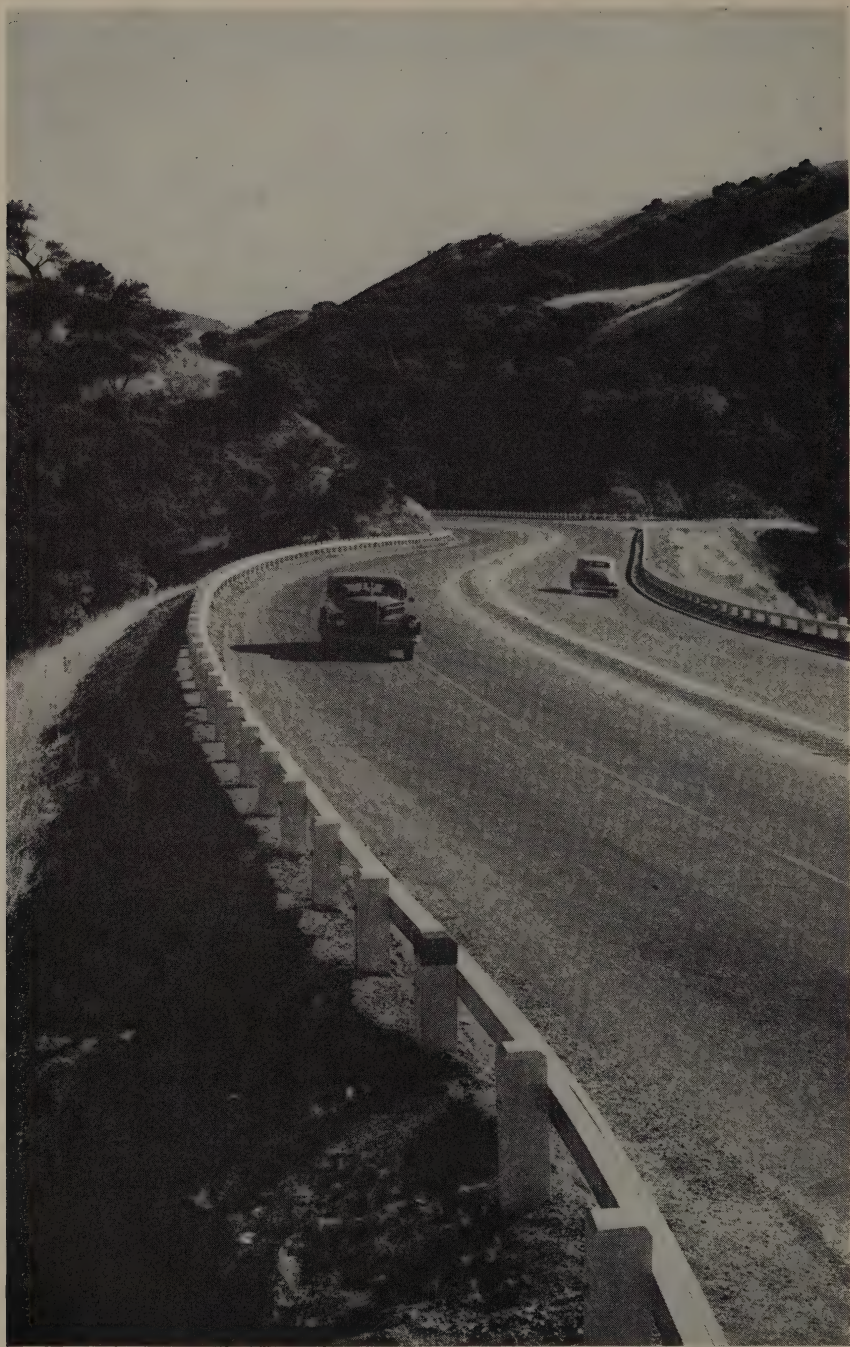
1. Materials and supplies	\$22,729 67
2. Service and expenses	56,129 13
3. Salaries and wages	305,540 44
4. Equipment rental	17,379 64
5. Subtotal	\$401,778 88

Equipment Upkeep

6. Repair of equipment	\$1,588,360 98
7. Transfer of equipment	75,264 01
8. Salvage operations	4,161 33
9. Stores adjustments	1,103 75
10. Stores expenses	18,395 98
11. Shop expenses	2,186 62
12. Insurance premium	52,174 13
13. Equipment damaged (fire accident)	32,251 12
14. Equipment loss (fire or accident)	4,117 25
15. Miscellaneous expenses	6,476 20
16. Total operating expenses	\$2,186,270 25
17. Equipment depreciation	1,027,292 02
18. Total equipment expense	\$3,213,562 27
19. Adjusted depreciation on equipment disposed of	508,636 52
20. Rental and income from other sources	\$2,808,765 88
21. Excess income over expenses	\$103,840 13

Comparative summary

	<i>Fiscal Year Ending June 30, 1948</i>	<i>Fiscal Year Ending June 30, 1947</i>
22. Equipment repairs	\$1,588,360 98	\$1,460,033 65
23. Miscellaneous expenses	196,130 39	130,271 70
24. Administrative expenses	401,778 88	315,718 74
25. Depreciation reserve	518,655 50	249,218 69
26. Total expense	\$2,704,925 75	\$2,155,242 78
27. Total income	2,808,765 88	2,380,900 83
28. Excess income over expenses	\$103,840 13	\$225,658 05



RECENTLY COMPLETED PORTION OF CUESTA GRADE near San Luis Obispo,
U. S. 101

ADMINISTRATION

Reference to the organization chart on page 10 will indicate the following phases of the work of the Division of Highways as being under the direction of the Assistant State Highway Engineer, Administration: the Office Engineer's functions; county and county cooperative projects; city and city cooperative projects; and departmental stores.

In the California organization the office engineer's functions include administration of federal aid apportionments with the exception of federal aid secondary apportionments which are administered under county and county cooperative projects. The Office Engineer also supervises engineering budget control and preparation of financial votes for commission action; specification preparation, final correlation of contract plans and specifications; advertising for bids, bid opening and preparation of contracts; the processing of progress and final estimates on contracts; the department's general files, blueprinting and reproduction; engineering review and preparation of condemnation resolutions, abandonment and relinquishment votes for action by the commission; preparation and publication of departmental reports together with numerous miscellaneous chores necessary to the administration of the Division of Highways.

California statutes require that 87½ percent of Federal Aid Secondary apportionments be expended for improvement to county roads which are on the Federal Aid Secondary System. Administration of these apportionments and engineering control of the work falls under the function of county and county cooperative projects.

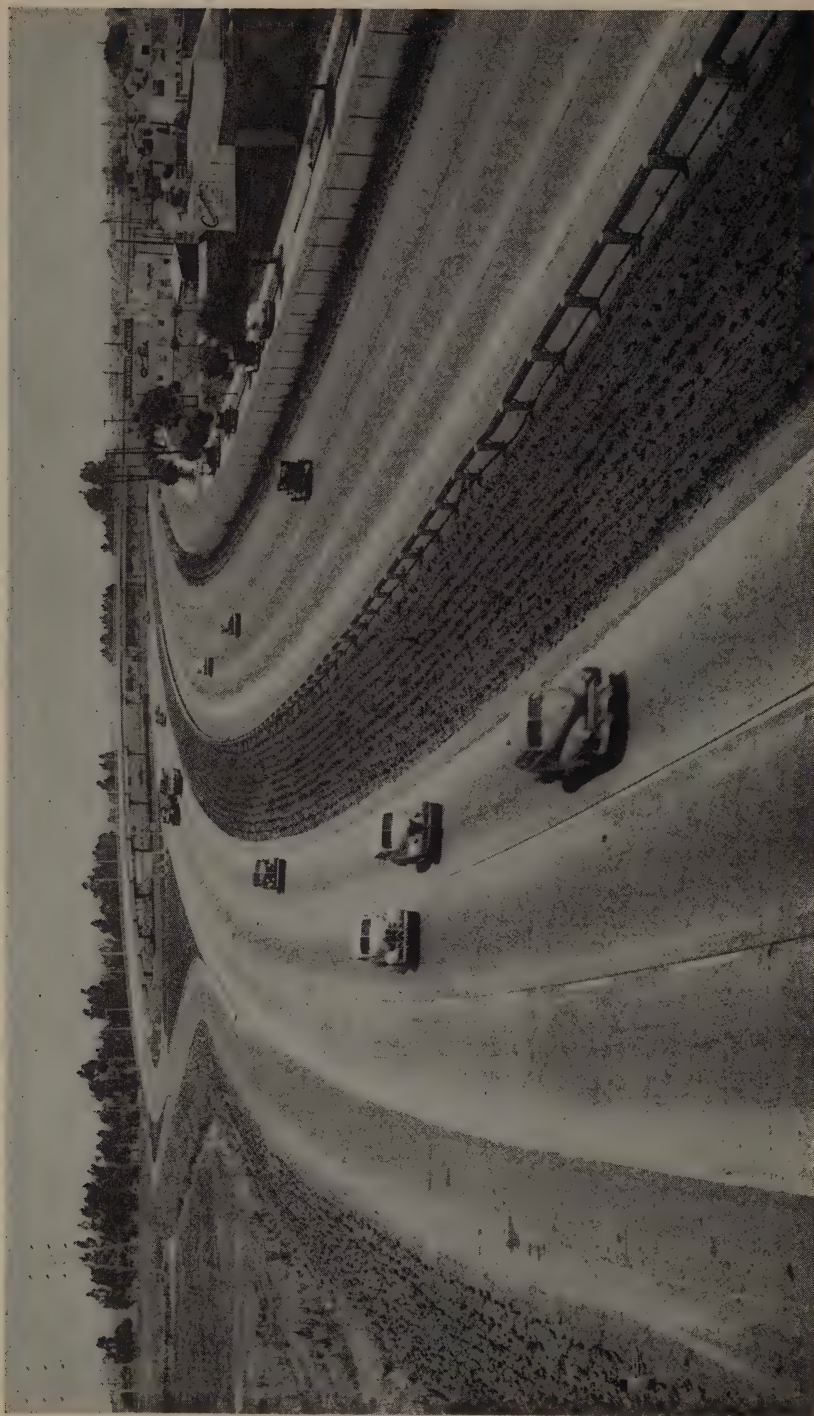
The city and city cooperative projects function involves administration of funds allocated to cities under the Collier-Burns Highway Act.

The Stores Section under Administration involves the purchase, warehousing and internal distribution of supplies and equipment, other than road equipment, for the entire Division of Highways.

FEDERAL AID

At the beginning of the 1947-48 Fiscal Year the Division of Highways was busily engaged in placing under construction as rapidly as plans and specifications could be prepared, projects designed to obligate the federal funds apportioned to California by the Federal Aid Highway Act of 1944.

The third and final apportionment of federal funds provided under this act had been apportioned to California prior to the beginning of this fiscal year. In making this final apportionment, the Federal Works Administrator withheld a sum equal to 5 percent of the total authorizations. This sum was retained to permit any adjustments that might be required by pending federal legislation which would increase the amount



BAY SHORE FREEWAY AND PENINSULAR AVENUE OVERCROSSING IN SAN MATEO, U. S. 101 BY-PASS

allowable to the Public Roads Administration for administering the Federal Aid Highway Act and to make adjustments in the areas of some states by including the areas of water adjacent to such states which would result in changing the amounts of federal aid apportionments to the states. Federal aid legislation was enacted into law to permit the Federal Works Administrator to deduct $3\frac{3}{4}$ percent of the authorized appropriation for the fiscal year ending June 30, 1948, and subsequent fiscal years, to provide funds for Public Roads to administer the act. The proposed legislation to increase the areas of certain states by including adjacent water ways was not enacted into law.

By reason of the newly enacted federal legislation the Federal Works Administrator apportioned to the various states the difference between the 5 percent withheld and the $3\frac{3}{4}$ percent to be legally withheld. California's share of this supplemental apportionment, which was made on June 30, 1948, is \$115,557 for primary federal aid projects, \$66,138 for projects on the Federal Aid Secondary System and \$104,131 for federal aid urban highway projects. The total of the three classes of funds is \$285,826.

It is anticipated that California will absorb the additional funds for primary federal aid projects and federal aid urban highway projects, by application to previously approved projects. The effect of this supplemental apportionment for projects on the Federal Aid Secondary System is discussed further in this report under "Federal Aid Secondary Roads."

Instructions issued by the Public Roads Administration on December 23, 1947, required that all federal aid funds appropriated by the Federal Aid Highway Act of 1944 should be combined in one program for each of the three classes of funds without regard to fiscal year apportionments. Subsequent to the issuance of these instructions, cumulative programs for each of the three classes of federal funds were submitted and given federal approval.

The combined program for Primary Federal Aid projects included 91 contracts and a planning survey project with a total cost of \$53,847,000 which involves expenditure of \$26,818,600 federal aid. Of this sum, 22 contracts estimated to cost \$9,660,500 and involving \$5,058,000 federal funds were completed prior to the beginning of this fiscal year. During the fiscal year, 39 projects were completed at a cost of \$20,712,500 including federal funds in the amount of \$10,514,500. On 27 contracts work was in progress at the end of the fiscal year at a cost of \$19,983,000 involving federal funds in the amount of \$9,511,400; two projects, advertised but not placed under contract at the end of the year, were estimated to cost \$1,900,700, with federal funds in the amount of \$890,200; and one contract was in the program stage at an estimated cost of \$899,534 involving federal funds in the amount of \$442,224. The planning survey project is estimated to cost \$690,766 with federal funds in the amount of \$402,278.

The combined program for federal aid urban highway projects included 80 contracts and a planning survey project at a total cost of \$49,369,000 with federal money amounting to \$24,158,437. Of this sum, 12 contracts were completed before the beginning of the fiscal year at a cost of \$2,255,800 involving federal funds in the amount of \$1,214,800.

During the year a total of 44 contracts involving federal aid urban highway funds were completed at a cost of \$24,077,000 with federal urban money in the amount of \$11,687,300; work was in progress at the close of the fiscal year on 20 contracts at a cost of \$17,671,700 with the federal share amounting to \$9,166,100; one project was advertised but not under contract at the end of the fiscal year with an estimated cost of \$1,888,900 with federal funds in the amount of \$506,300 and three projects were in the program stage at an estimated cost of \$2,853,316 with federal funds amounting to \$1,221,562. The planning survey project is estimated to cost \$622,284 with federal urban funds in the amount of \$362,375.

The four remaining projects involving federal aid primary and urban funds were scheduled for early advertisement and it is anticipated that these four units will be under contract before the end of the summer of 1948. A cumulative program for projects on the Secondary Federal Aid System was submitted to public roads as discussed further in this report under "Federal Aid Secondary Roads."

Immediately prior to the termination of the fiscal year the Congress of the United States approved the Federal Aid Highway Act of 1948 which will insure the continuance of federal aid for highway construction until the fiscal year ending June 30, 1951.

The estimated yearly apportionments to California for federal aid construction are as follows:

Primary federal aid projects, \$7,997,000 a year for two years, or a total of \$15,994,000.

Urban highway projects, \$7,217,000 a year for two years, or a total of \$14,434,000.

For projects on the Federal Aid Secondary System, \$4,576,000 a year for two years, or a total of \$9,152,000.

The total of these three classes of projects will provide federal funds in the amount of \$19,790,000 a year or a total of \$39,580,000 for the two-year period.

The estimated apportionment to California for forest highways is \$2,846,000 a year for a two-year period or a total of \$5,692,000. This amount together with the above apportionments for primary, urban, and federal aid secondary highway projects insures California of \$45,272,000 in federal funds for highway construction during the next two years.

This new Federal Aid Act of 1948 provides that the first year apportionment of the three classes of federal aid must be made to the states on or before September 1, 1948, and it is anticipated that as soon as such apportionments are made programs designed to utilize California's share of federal aid primary and urban funds will be submitted to Public Roads Administration for approval.

Notices of intention to file claims by cities and counties for damage to county roads and city streets by war-time traffic were transmitted by the department to the Public Roads Administration. A total of 130 notices and 58 claims have been transmitted to date. Forty-nine of these claims have been recommended for payment by the Public Roads Administration in the amount of \$353,553.65. Claims for damage to state highways are discussed under the Maintenance Engineer's section of this report.



REINFORCED CONCRETE ARCH BRIDGE across City Creek,
San Bernardino County



SOUTHERN PACIFIC R. R. UNDERPASS at Bailey Hill, Siskiyou County on U. S. 99

APPORTIONMENT OF FEDERAL FUNDS TO CALIFORNIA

Fiscal year ending	Primary Federal Aid	Urban Federal Aid	Emergency Advance Fund	Emergency Relief and Construction Fund	U.S. Public Works Fund	1935 Public Works High- way Fund	Works Program Fund	
							Highways	Grade crossing
June 30, 1917.....	\$151,063 92							
June 30, 1918.....	302,127 84							
June 30, 1919.....	1,980,415 53							
June 30, 1920.....	2,896,071 77							
June 30, 1921.....	3,054,675 51							
June 30, 1922.....	2,462,098 53							
June 30, 1923.....	1,641,399 02							
June 30, 1924.....	2,140,463 10							
June 30, 1925.....	2,487,157 78							
June 30, 1926.....	2,472,636 00							
June 30, 1927.....	2,484,706 00							
June 30, 1928.....	2,483,437 00							
June 30, 1929.....	2,486,415 00							
June 30, 1930.....	2,495,345 00							
June 30, 1931.....	4,179,831 00							
August 31, 1931.....			\$3,008,827 35					
June 30, 1932.....	4,181,212 00							
June 30, 1933.....	4,140,910 53			\$4,667,188 00				
Available on and after July 1, 1933.....					\$15,607,354 00			
June 30, 1934.....								
June 30, 1935.....								
June 30, 1936.....	4,756,959 00					\$7,932,206 00		
June 30, 1937.....	4,751,712 00							
Floods of 1937 and 1938.....							\$7,747,928 00	\$7,486,362 00
June 30, 1938.....	4,858,220 00							
June 30, 1939.....	4,735,268 00							
Floods of 1940.....								
June 30, 1940.....	3,814,812 00							
June 30, 1941.....	4,382,965 00							
Available on and after Nov. 19, 1941.....								
Available on and after Dec. 1, 1941.....								
June 30, 1942.....	3,982,125 00							
June 30, 1943.....	3,989,896 00							
June 30, 1946.....	9,018,749 00	\$8,122,233 00						
June 30, 1947.....	9,017,519 00	8,122,233 00						
June 30, 1948.....	8,897,891 00	8,018,102 00						
Totals.....	\$104,246,042 53	\$24,262,588 00	\$3,008,827 35	\$4,667,188 00	\$15,607,354 00	\$7,932,206 00	\$7,747,928 00	\$7,486,362 00

APPORTIONMENT OF FEDERAL FUNDS TO CALIFORNIA—Continued

DIVISION OF HIGHWAYS

53

Fiscal year ending	Secondary Federal Aid	Federal Aid Grade Cross- ing Fund	Emergency Relief High- way Fund	Strategic Network Fund	Advance Engineering Fund	Federal Lands Fund under State Supervision	Access Road Fund	Flight Strip Fund
June 30, 1917	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1918	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1919	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1920	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1921	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1922	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1923	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1924	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1925	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1926	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1927	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1928	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1929	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1930	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1931	-----	-----	-----	-----	-----	-----	-----	-----
August 31, 1931	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1932	-----	-----	-----	-----	-----	\$6,841 99	-----	-----
June 30, 1933	-----	-----	-----	-----	-----	-----	-----	-----
Available on and after July 1, 1933	-----	-----	-----	-----	-----	-----	-----	-----
June 30, 1934	-----	-----	-----	-----	-----	272,369 71	-----	-----
June 30, 1935	-----	-----	-----	-----	-----	232,478 97	-----	-----
June 30, 1936	-----	-----	-----	-----	-----	151,587 59	-----	-----
June 30, 1937	-----	-----	-----	-----	-----	-----	-----	-----
Floods of 1937 and 1938	-----	-----	\$1,644,269 37	-----	-----	-----	-----	-----
June 30, 1938	\$971,644 00	\$1,874,656 00	-----	-----	-----	36,698 89	-----	-----
June 30, 1939	947,054 00	1,825,553 00	-----	-----	-----	191,493 67	-----	-----
Floods of 1940	-----	-----	315,220 63	-----	-----	-----	-----	-----
June 30, 1940	571,229 00	735,256 00	-----	-----	-----	88,940 66	-----	-----
June 30, 1941	571,992 00	1,114,363 00	-----	-----	-----	95,238 00	-----	-----
Available on and after Nov. 19, 1941	-----	-----	-----	\$1,416,133 00	-----	-----	*\$35,551,219 37	\$2,245,325 45
Available on and after Dec. 1, 1941	-----	-----	-----	997,474 00	\$398,990 00	-----	-----	-----
June 30, 1942	696,872 00	799,099 00	-----	-----	-----	85,000 46	-----	-----
June 30, 1943	698,232 00	798,434 00	-----	-----	-----	-----	-----	-----
June 30, 1946	5,162,254 00	-----	-----	-----	-----	-----	-----	-----
June 30, 1947	5,161,445 00	-----	-----	-----	-----	-----	-----	-----
June 30, 1948	5,092,619 00	-----	-----	-----	-----	-----	-----	-----
Totals	\$19,873,341 00	\$7,147,361 00	\$1,959,490 00	\$2,413,607 00	\$398,990 00	\$1,160,649 94	\$35,551,219 37	\$2,245,325 45
Grand total	-----	-----	-----	-----	-----	-----	-----	\$245,708,499 64

* Includes \$182,500 of Federal Housing Authority Funds.

FEDERAL SECONDARY ROADS

The reorganization made in the Division of Highways placed the Engineer of Federal Secondary Roads under the jurisdiction of the Assistant State Highway Engineer, Administration. In addition to supervising county projects on the Federal Aid Secondary System, he was assigned the responsibility for administering state allocations to joint highway districts and the handling of all county-state relations which devolved upon the State by reason of the Collier-Burns Highway Act of 1947.

In connection with the Federal Aid Secondary System, contracts were awarded for 60 projects during the past fiscal year, which involved the construction of 36 bridges and approximately 200 miles of road. The estimated cost of these projects, including engineering, was \$10,160,000.

The following is the status of federal aid secondary projects as of June 30, 1948:

<i>County Projects</i>	<i>Length Miles</i>	<i>Cost</i>	<i>F. A. S. and State funds</i>	<i>Other funds</i>
<i>Under Contract</i>				
24 Roads -----	134.6	\$3,547,531	\$2,994,341	\$553,190
17 Bridges -----		3,364,520	2,766,424	598,096
Subtotal -----	134.6	\$6,912,051	\$5,760,765	\$1,151,286
<i>Completed</i>				
44 Roads -----	248.5	\$7,204,407	\$6,259,200	\$945,207
23 Bridges -----		2,259,046	1,847,746	411,300
Subtotal -----	248.5	\$9,463,453	\$8,106,946	\$1,356,507
County Subtotals	383.1	\$16,375,504	\$13,867,711	\$2,507,793
<i>State Projects</i>			<i>F. A. S. Funds</i>	
1 Road -----	4.3	\$818,300	\$413,400	\$386,900
5 Bridges -----	2.3	1,575,026	888,318	686,708
40 Flashing lights		192,852	186,990	5,862
Subtotal -----	6.6	\$2,586,178	\$1,506,708	\$1,079,470
Total -----	389.7	\$18,961,682	\$15,374,419	\$3,587,263

As of the end of the fiscal year, programs have been submitted to the Public Roads Administration having a total cost of \$31,814,000 involving improvement to some 676 miles of road.

As previously stated, in the 1948 Fiscal Year apportionment of federal aid secondary funds made May 12, 1947, the Public Roads Administration retained 5 percent of that apportionment to permit any adjustments that may have been required by pending legislation. On June 30, 1948, the Commissioner of Public Roads released 1¼ percent of the retained sum. This provided California an additional \$66,138 of federal aid secondary funds, 87½ percent of which, or \$57,871, was allocated to the counties and apportioned among them in compliance with the provisions of the County Highway Aid Act of 1945. By reason of this increase, the counties have been allocated a total of \$13,489,279 in federal funds, which coupled with the \$12,000,000 in state funds made available to the counties under the County Highway Aid Act makes a total allocation of \$25,489,279.

During the past year, minor revisions were made in the California Federal Aid Secondary System and as of June 30, 1948, this system, as approved by the Commissioner of Public Roads, consisted of 8,958.1 miles, of which 3,696.7 miles are on state highways, and 5,261.4 miles are on county roads. This represents an increase in mileage of 69.9 miles over that noted in the "First Annual Report."

Under the provisions of the County Highway Aid Act of 1945, 87½ percent of federal aid secondary highway funds was to be expended on projects under the jurisdiction of the counties; 12½ percent was retained for the state, of which 11½ percent was to be expended for highway planning. The Highway Commission reserved \$265,000 for grade crossing projects and \$1,430,796 for the improvement of roads and bridges on the federal aid secondary portion of the State Highway System.

On June 29, 1948, the President approved the "Federal Aid Highway Act of 1948." This act provided \$450,000,000 each for fiscal years ending June 30, 1950, and June 30, 1951. Of this \$450,000,000, \$135,000,000 was set aside for federal aid secondary roads, California's share of which is estimated at \$4,576,000. Allocation of the F. A. S. fund will await the 1949 Session of the State Legislature.

The 1948 act extends the period for obligation of federal aid funds provided by the Federal Aid Highway Act of 1944 from June 30, 1950, to June 30, 1951.

The Collier-Burns Highway Act of 1947, Chapter 11, Statutes of 1947 (First Extra Session) was approved by the Governor June 23, 1947. Under the provisions of this act, the responsibility devolved upon the department to approve the maintained mileage and county primary road systems selected by the various counties. It is also the responsibility of the Division of Highways to certify to the State Controller the mileage of maintained roads.

On December 29, 1947, the department certified to the State Controller that the county maintained road system consisted of 64,536.846 miles.

Under the provisions of the Collier-Burns Act, the counties are authorized in May of each year to submit revisions to their maintained road system, and as a result of these revisions, the Director of Public Works certified to the State Controller that as of June 30, 1948, the county maintained road system consisted of 64,580.794 miles, which represented an increase in the maintained mileage of 43.948 miles over that covered by the previous certification.

The initial system of county primary roads in the City and County of San Francisco was approved by the Highway Commission May 20, 1948, and on June 24, 1948, it approved the system for the other 57 counties. Under provisions of the act, no county shall designate a primary road system in excess of 50 percent of its maintained mileage.

The counties selected, and the Highway Commission approved, a county primary road system of 18,866.63 miles, which is approximately 29 percent of the mileage of maintained roads.

The Highway Planning Survey is now preparing maps showing the county maintained and primary road systems for all counties.



REINFORCED CONCRETE BRIDGE ACROSS FEATHER RIVER at Bidwell Bar
built by Butte County as a F. A. S. Project

Joint Highway Districts

Under the provisions of the Joint Highway District Act, 27 Joint Highway Districts have been organized.

Section 4 of the Collier-Burns Highway Act of 1947 stipulates that not more than one-half of 1 percent of funds allocated to state highways in each county group may be used for state aid to joint highway districts.

At this time but four joint highway districts are active. The present status of these four districts is as follows:

Joint Highway District No. 9—This Joint Highway District was organized May 28, 1928, to provide for improvement of the Ocean Shore Highway in Santa Cruz, San Mateo, and San Francisco Counties. During the 1931 Session of the Legislature, this route was taken into the State Highway System as State Highway Route 56.

During the past year, the Joint Highway District has authorized the use of \$16,000 to cover its share of the cost of the construction of a structure across White House Creek in San Mateo County on Road IV-S.M-56-A. The agreement was executed May 11, 1948.

Joint Highway District No. 10—This district was organized September 15, 1928, and covers the construction of the Junipero Serra extension between San Francisco and Burlingame. The State has been contributing an annual payment of \$47,500, representing one-third of the cost to assist in financing the improvement. During the years, this road has been improved as a WPA project and a joint highway district project.

The fifth unit between Sneath Lane and Millbrae is estimated to cost about \$570,000, which is to be financed over a four-year period, the State to contribute a total of approximately \$190,000. Work on this unit will not be undertaken until the \$570,000 has been accumulated.



HACIENDA BRIDGE ACROSS RUSSIAN RIVER, Sonoma County, before widening.
This structure originally a railroad bridge



HACIENDA BRIDGE AFTER WIDENING, F. A. S. Project

Joint Highway District No. 14—This Joint Highway District was organized December 21, 1929. At present, the district is active between Susanville and Adin, which is within the limits of F. A. S. Route 988. During the past year construction was completed between Susanville and the North Side of Willow Creek Valley, a length of some 17 miles. This improvement was financed jointly as a joint highway district project and as a federal aid secondary project.

During the next fiscal year, construction will be carried on between Hayden Hill and Adin, which likewise will be financed as a joint highway district and federal aid secondary project.

It is anticipated that the portion of the project between Susanville and the north side of Willow Creek Valley will be oiled during the summer of 1948.

Joint Highway District No. 26—This district was organized September 26, 1938, by Alameda and Contra Costa Counties. The major portion of the project is in the City of Oakland.

Under Section 527 of the Collier-Burns Act, this district highway was taken into the State Highway System as State Route 227, and has since been declared a freeway by the California Highway Commission.

Preliminary engineering is being prosecuted under the supervision of the Joint Highway District Engineer, and on July 20, 1948, a joint agreement was executed by the State and the district covering the work to be done and the funds to be contributed by various parties to the agreement.

It is anticipated that considerable work will be undertaken during the next year in connection with the construction of this freeway project and at the present time plans have been completed for the construction of a bridge at Broadway Terrace.

CITY AND COOPERATIVE PROJECTS

Enactment of the Collier-Burns Highway Act vitally affected the allocation of gas tax revenue to cities.

The act repealed Section 203 of the Streets and Highways Code which allocated one-fourth cent per gallon of tax on gasoline for the maintenance, acquisition and construction or improvement of state highway routes within cities. The new act imposes upon the Division of Highways all financial responsibility for such maintenance, acquisition, construction or improvement. In repealing Section 203, the act specifically provided that such repeal shall not affect the expenditure of any moneys allocated or accumulated for the acquisition of right of way or the construction, improvement or maintenance of state highways within cities prior to the effective date of the repeal, but that much moneys shall be expended for the purposes for which it was allocated or accumulated the same as if Section 203 had not been repealed.

Section 194 of the Streets and Highways Code, which allocated one-fourth cent per gallon of tax on gasoline for expenditure upon major city streets, was amended to increase the allocation to five-eighths cent per gallon. The act provides that three-fifths of the money allocated to cities shall be expended for the construction of streets included in the system of major city streets within the city and that not more than two-fifths of the money allocated to a city may be expended for the maintenance of the system of major city streets and of secondary city streets.

The act further provides that each city shall file annually with the State Controller a complete report of expenditures for street or road purposes during the fiscal year ending on June 30th. This report is in addition to other reports required by the Streets and Highways Code to be filed with the Department of Public Works. It also provides that no payment of gas tax funds may be made to any city that is delinquent in filing any report required by law showing the amount of money received by such city and its disposition.

The urban population of California for purposes of apportioning gas tax revenue to the 303 incorporated cities as of June 30, 1948, was 6,773,902 as compared with a population on June 30, 1947, of 6,541,123 or an increase of 232,779 during the year. This increase in population does not necessarily represent the actual growth of the cities. It is made up of three factors:

- (1) The increase in population of the city as determined by special federal census, and this figure represents the actual growth of the city.
- (2) The increase in population due to annexation of unincorporated territory.
- (3) The incorporation of previously unincorporated communities.

During the past year 57 cities have had special counts made by the Bureau of the Census, resulting in an increase in urban population of 183,366.

Since the original enactment in 1943 providing for the special census, 202 cities have had such counts made. The aggregate increase in population since 1940, as determined by special census, is 1,623,528. This increase is 24.2 percent of the total calculated urban population.

Since July 1, 1947, 101 cities have annexed 256 tracts of unincorporated territory having a population of 14,874 determined by multiplying the number of registered electors in such territory by three.

During the same period, the following six communities incorporated as cities:

Barstow in San Bernardino County;
Millbrae in San Mateo County;
Brentwood in Contra Costa County;
Orange Cove in Fresno County;
Port Hueneme in Ventura County;
San Pablo in Contra Costa County.

These cities had a total calculated population of 34,539.

Revenue

The amount of gasoline tax that a city receives depends not only upon its population but upon the total gas tax revenue.

By the terms of the Collier-Burns Highway Act the allocation of gas tax revenue for expenditure upon state highway routes within cities terminated December 31, 1947. The total amount apportioned to cities for expenditure upon state highways during the six months' period from July 1 to December 31, 1947, amounted to \$3,196,700.83. This amount represents the net revenue derived from one-fourth cent per gallon tax on gasoline and compares with the amount of \$2,918,698.70 apportioned for the corresponding period of the preceding year. This is a gain of \$178,002.13 or 6.1 percent.

The amount allocated to cities for expenditure upon major city streets and secondary city streets for the fiscal year July 1, 1947, to June 30, 1948, was \$12,835,402.48. During the preceding fiscal year the amount allocated for expenditure upon major city streets was \$5,959,285.11. These two figures cannot, however, be compared, as during the fiscal year 1948 the allocation under provisions of the Collier-Burns Act was increased from one-fourth cent to five-eighths cent per gallon tax on gasoline, while the allocation during the 1947 Fiscal Year was only one-fourth cent per gallon.

Expenditures

During the war years, because of restrictions upon use of materials and the shortage of personnel, very little city street work was performed outside of essential maintenance work, with the result that much gas tax money allocated for expenditure upon major city streets was accumulated and allowed to remain on deposit in the State Treasury.

Since the close of the war the continued scarcity of men, particularly engineers, and the keen competition for construction labor have operated to postpone still further large scale street improvements.

With the beginning of the 1949 Fiscal Year, and the increased allocation of gas tax revenue to cities, there is a decided quickening in street construction activities. The total amount available for budgeting during the fiscal year 1949, including accrued funds and estimated revenue, is \$25,700,000. Budgets for expenditure of \$13,600,000 of this amount by 175 cities have been approved by the department.

HIGHWAY STORES DEPARTMENT

Since V-J Day in August, 1945, the Division of Highways, acting through the Department of Finance, has made large purchases of material from the War Assets Administration resulting in a very considerable net saving to the State. In order to take advantage of further savings and to expedite the buying and distribution of state-owned materials used in maintenance, design and construction of state highways, it was decided to organize a Highway Stores Department in April, 1947.

Subsequently, two central warehouses were established, one in the Los Angeles area serving the southern part of the State and one in Sacramento to serve the northern portion. The headquarters offices of the department are located in the Public Works Building in Sacramento.

Purpose

In general, the Highway Stores Department works in conjunction with the several headquarters departments and the 11 highway districts concerning the problems of securing materials and supplies.

Because of material shortages during and after the war, special emphasis was placed on the availability of materials. The procedures and methods developed during this period have proven adaptable to a permanent stores department in line with modern industrial practice.

The purpose of the Stores Department is to provide storage facilities for those commodities capable of being purchased in large quantities with consequent reduction in price and to afford rapid distribution from warehouses with a minimum of delay and paper work. For instance,

under the old system it was found that every item was purchased on an average of 12 times per year. The purchase of 1,000 items, 12 times each, results in 12,000 purchase orders and 12,000 bills to pay. When considered that each purchase results in multiple copies of local requests, requisitions, purchase orders, receiving records, shipping records, invoices, bills, transfer records, schedules, and various correspondence, the amount of paper work is overwhelming. Purchasing highway materials on a wholesale basis once or twice a year rather than on a retail basis of 12 times per year, not only results in substantial monetary savings but also in large savings in paper work.

Except in unusual cases, under the former method, each purchase was subject to a minimum delay of 30 days between the time of originating a requisition and delivery of the material; whereas, the Stores Department at present stocks approximately 4,000 items and attempts to maintain 48-hour delivery service. It is estimated that the number of items carried by the warehouse will double within the next year.

The prime consideration is, first to expedite the flow of materials to points of usage, and second, to realize a savings by using the large scale buying power of the Division of Highways. The Stores Department is a sound engineering addition to supplement the other departments of design, construction and maintenance. The analytical study of needs and usage effects a substantial savings in expenditures, which are both direct and intangible; direct savings insofar as purchase price is concerned and intangible insofar as savings can be effected in lost time waiting for delivery.

Organization

Further reasons for organizing a Stores Department was that there were five separate groups in headquarters office with a total personnel of 16, whose functions consisted of procurement of materials in some form or another. These separate groups have been incorporated into the new department. Each has brought his special problems to the new department with the result that the Stores Department has broadened beyond the scope of merely warehousing and distribution of supplies. Some of these additional activities are included in the following:

1. Initiation of projects for large quantity production such as the purchase and/or fabrication of steel fence posts, guide posts, signs, pilings, survey stakes and miscellaneous other items.

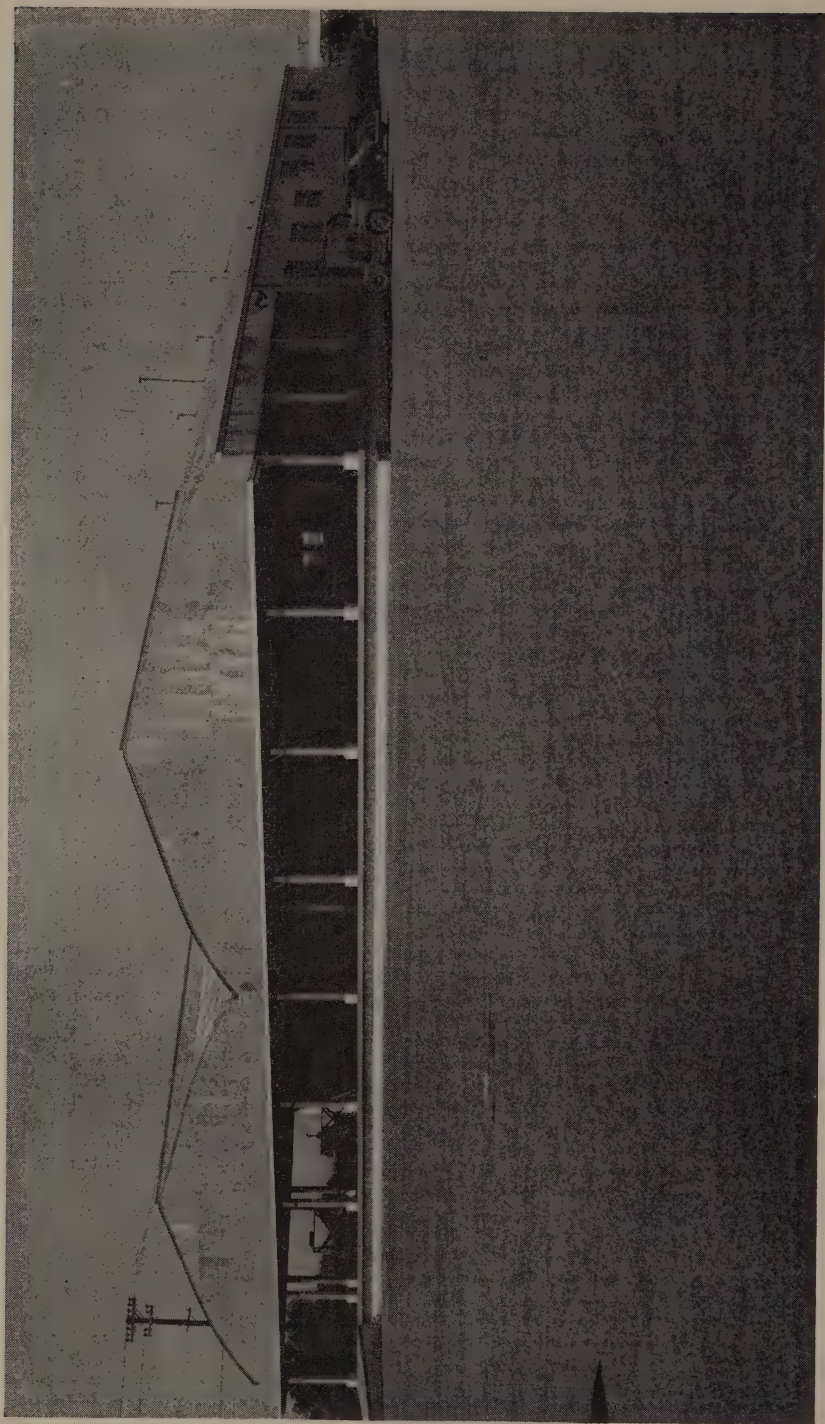
2. Analyzation of the changing needs for materials and supplies in the line of economy, availability and extent of usage.

3. Maintenance of an organization for the procurement of surplus material from the War Assets Administration. Purchases from this agency to date represent a cost of \$881,612 with a commercial value of \$1,461,337.

4. Supervision and maintenance of Public Works Buildings, together with the custody of property and equipment.

The distribution of materials, property accountability and accounting work in connection therewith, which was formerly performed by the districts and other departments, has been taken over in part by the Stores Department.

The total personnel of the new department is now about 55 employees.



STORES DEPARTMENT WAREHOUSE in Sacramento

Warehouses

As most destinations served by the warehouses are off-rail shipments, it was of prime consideration to select warehouse sites which were favorably located for truck hauling as well as rail hauling. The two warehouse sites purchased are located as follows:

Sacramento—17 acres on Folsom Boulevard between 59th and 64th Streets. This property adjoins a 10-acre property formerly purchased as a site for the Division of Highways Materials and Research Laboratory, making a total of 27 acres for Division of Highways development.

The Stores Department erected temporary warehouses, purchased from War Assets, approximating 10,000 square feet in area on the above laboratory property. These buildings will later serve as more or less permanent storage for the laboratory and other highway departments.

Contracts have been let for construction of a permanent concrete warehouse 33,000 square feet in area and for grading and surfacing about three acres for outside storage on the new 17-acre site. It is anticipated the building and surfacing will be completed in the late summer of 1948 and will provide permanent quarters for disbursing of materials to the northern portion of the State.

Los Angeles—10 acres near Watts at 111th Place, Lanzit and Central Avenues. It is proposed to construct during the current year a permanent warehouse and outside storage facilities on this site, similar to that in Sacramento.

During 1946 a warehouse was rented at Puente, in the Los Angeles area, in order to take care of surplus war supplies in this vicinity. This warehouse was later taken over as temporary quarters of the department and is still in use.

Business

Exclusive of heavy equipment, the Division of Highways purchases about \$7,500,000 worth of material and supplies per year which is now processed by the Stores Department. Of this amount, present volumes indicate that from \$1,000,000 to \$2,000,000 will be distributed through the warehouses. The remainder consists of rock, asphalt, plant-mix and similar items which are not readily warehoused or transported and are therefore delivered directly from vendor to the work.

Accompanying tabulations and charts show Purchases-Warehouse Stock vs. Direct Issue; and Warehouse Purchases vs. Sales.

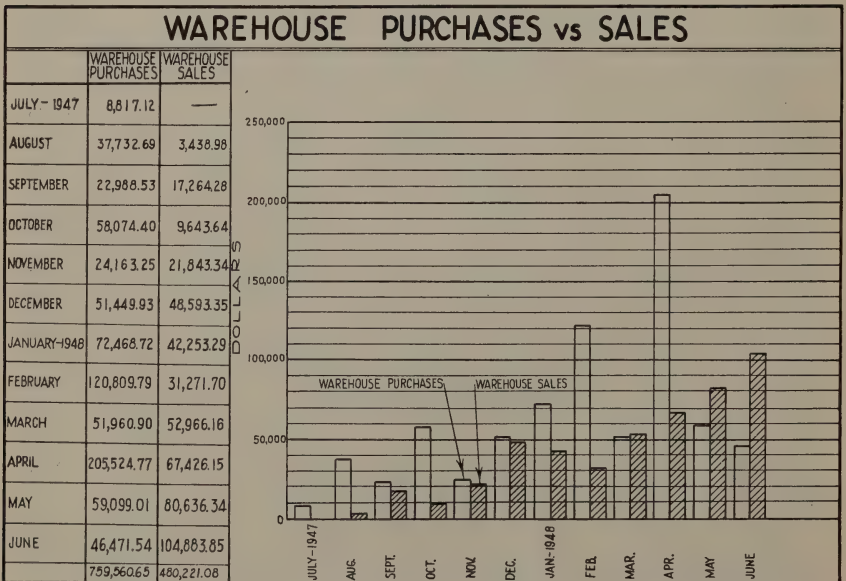
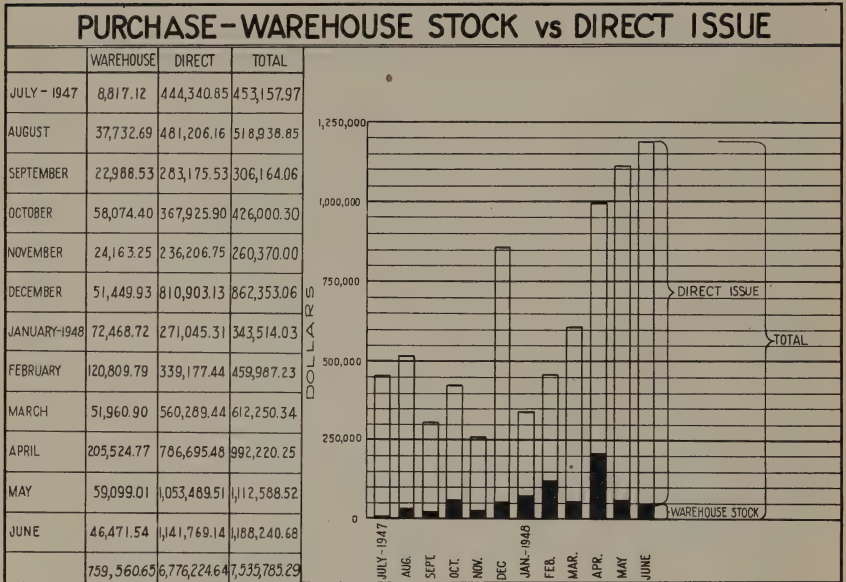
In addition to its regular functions the Stores Department has entered into agreements with other state and private agencies for manufacture of several commodities approximating \$500,000 in value. The items consist of steel fence posts, sign posts, guide posts, snow poles, sign braces, fiber washers, snow fence, survey stakes, furniture and other items. In general, these items have been difficult to obtain. A large portion of the materials used in fabricating the above items were purchased from War Assets Administration and the finished products will result in a saving to the State of an additional \$500,000.

Stores Department inventory accounts are separated into two items, the 137A and 137 N & S accounts.

The 137A account is controlled by the Stores Department but administered by each district, whereas the 137 N & S accounts otherwise

known as the "warehouse accounts" are controlled and administered directly by the Stores Department. Following is the amount in each of these accounts as of June 30, 1948:

137A Account	-----	\$855,959 71
137 N & S Account	-----	743,126 81
Total	-----	\$1,599,086 52



PLANNING

As detailed in the First Annual Report, the new administrative organization of the Division of Highways took place late in 1947, after the opening of the last fiscal year. In this Second Annual Report the activities of the several sections of the Planning Department are reported for the full fiscal year.

Acting under the planning function are sections covering budget, design, planning survey, traffic, public and employee safety.

THE BUDGET

The revenues which support the activities of the Division of Highways derive almost exclusively from traffic—the highway user. Reciprocally, the basic reason for the expenditure of these revenues is the benefit which it will bring to the highway user.

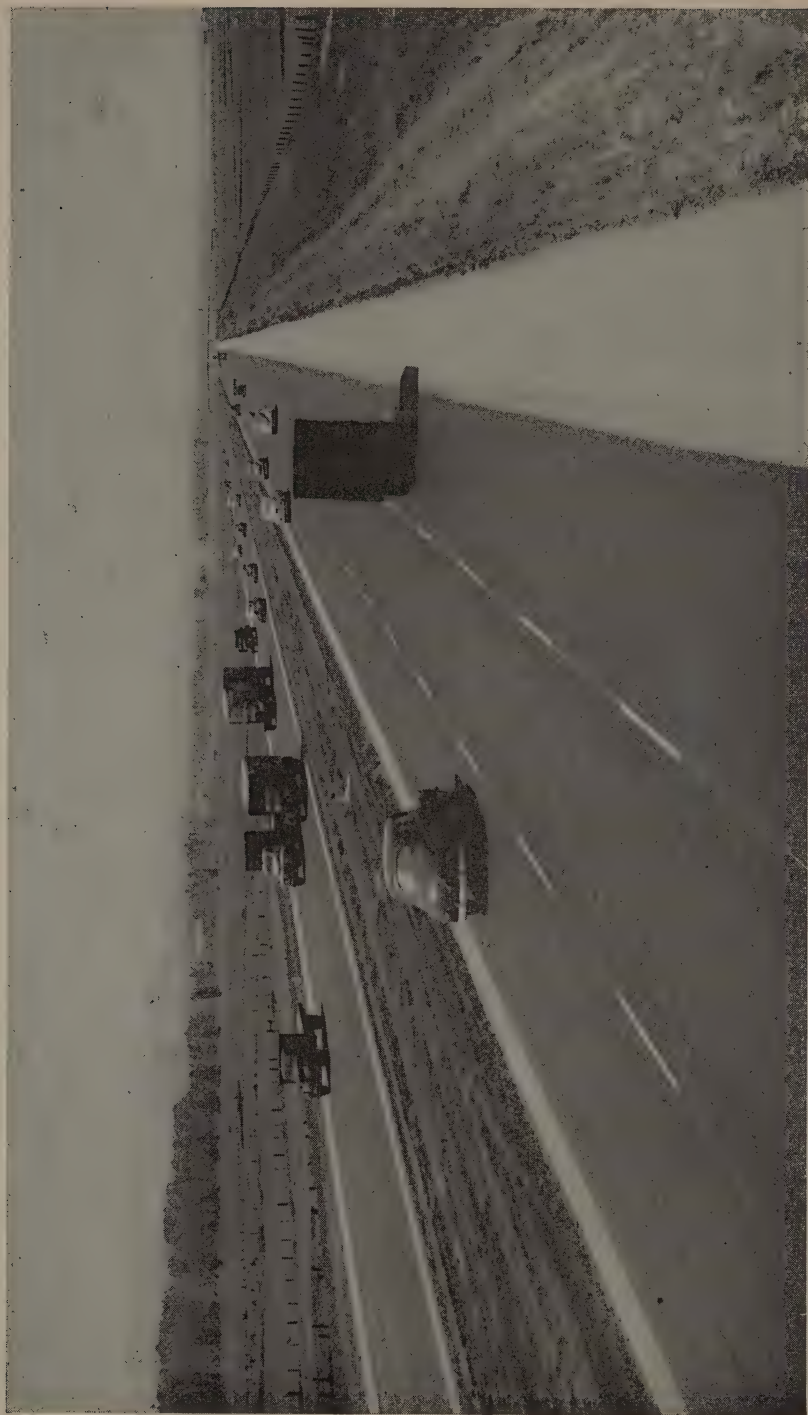
This direct relationship between traffic, both that presently existing and potential, its needs and the preparation of specific plans to meet those needs has been recognized by making the Budget Section an integral part of the Planning Department.

Annual Budget

The budget section is charged primarily with the preparation of the annual budget for presentation by the State Highway Engineer to the California Highway Commission for its consideration; and, when approved by the commission, to exercise those controls necessary to assure adherence to its provisions. No other functions can exceed in importance the wise budgeting of available funds, and because of this it must, in the final analysis, always remain the responsibility of the highest level of authority. Delegation of this task in its entirety naturally cannot be made and is not even contemplated, neither has it been possible in recent years for those in final authority to personally assume the whole burden. With the growth of the Division of Highways this has become progressively more difficult, and in 1944 the preparation of budgets was recognized as being a distinct province and assigned to the then Traffic Engineer.

Biennial Budget Discontinued

The Division of Highways, in common with other state agencies, has been operating on the basis of biennial budgets. Beginning with the 1947-1948 Fiscal Year, annual budgets are required. This requirement alone of budgets each year, with their original preparation, various reviews and revision, would of itself demand almost continuous attention. In addition, however, the Collier-Burns Highway Act also became effective in part with the 1947-1948 Fiscal Year, and in full with the 1948-1949 year. The various provisions of this act have not only materially



A SECTION OF BAY SHORE FREEWAY between Burlingame and South San Francisco, U. S. 101 By-Pass

increased the highway revenues and in like degree increased the work of budgeting, but in many ways they have also greatly complicated the whole procedure of budget making and control.

Appreciation of these facts was a prime reason for establishment of the Budget Section in the Planning Department when the general reorganization of the Division of Highways was effected in October, 1947. Thus, the Budget Section has operated as such for only a portion of this fiscal year. During this time it has participated in the preparation of the budget for the 1948-1949 Fiscal Year and has exercised budgetary control over the budget of the 1947-1948 year.

DESIGN

The change in organization of the division has made little, if any, change in either the duties or responsibilities of the functions over those previously discharged by the old departmental unit of Surveys and Plans.

There is an increasingly large volume of work for the Design Section to handle. This has been caused by the augmented construction program made possible by additional revenues provided by the Collier-Burns Highway Act. The act made fundamental changes in budgetary requirements which have had repercussion upon the operations of preparing projects through the stages of surveys and design to the final preparation of the contract plans.

The annual budget obviously requires that surveys and plans must be kept at least one year ahead of budgetary consideration of projects to permit the contracting of work in the same year it is authorized.

Volume of Survey and Plan Preparation

While an appreciable amount of advance planning was actively under way in 1947 in the event of favorable legislative action on the Collier-Burns Highway Act, a serious shortage of qualified engineering personnel made the effort difficult.

In spite of this difficulty, almost without exception, project schedules have been met; and in addition, substantial progress has been made toward achieving the necessary advance planning to meet future schedules.

A large increase in the number of projects proposed for advance planning has had its direct effect upon the work of the design function. The major part of these projects are of the complex type represented by modern freeway design, both rural and urban in type, which require a great amount of effort and care in every aspect of survey and plan preparation. By the same token, the review function of Headquarters Design personnel is of increased importance to insure that standards, policies and uniformity of design details are properly applied and followed.

Some appreciation of the volume of survey and plan preparation may be gained by the following statistics:

Freeway Declarations—At the beginning of the fiscal year, the California Highway Commission had declared 768.4 miles of state highway to be freeways.



RECENTLY COMPLETED BAY SHORE FREEWAY near South San Francisco,
U. S. 101 By-Pass



SIXTH STREET VIADUCT OVER RECENTLY COMPLETED SECTION OF SANTA
ANA PARKWAY in Los Angeles, U. S. 101

During the twelve months, July 1, 1947, to June 30, 1948, an additional 410.5 miles were declared freeways, making a total of 1,178.9 miles of declared freeway as of June 30, 1948.

Preliminary Engineering Authorizations—During the fiscal period, July 1, 1947, to June 30, 1948, 816 preliminary engineering authorizations to the various districts and the Bridge Department were activated. This is almost double the amount of preliminary engineering under way in any previous period and represents the tremendous effort which has been necessary to take care of immediate budgetary requirements as well as to develop a backlog of projects for future budgetary consideration.

Studies and Research

The program of investigation and research in paving and base design to insure the structural adequacy and economy of design practices was continued during the year.

A new concept of pavement design developed by the Materials and Research Laboratory was adopted for use on a trial basis. This concept, in theory, permits more accurate determination of pavement and base requirements, and if confirmed by later experience, will do much to eliminate many uncertainties which in the past have beset this controversial subject.

During the fiscal year, this section completed the study and analysis of the effect of heavy truck vehicles upon highway design costs.

Other Agencies

The Design Section continued to act as the coordination agency between the Division of Highways and other state agencies for which road and bridge improvements are undertaken.

Liaison between the Division of Highways and the U. S. Engineers and U. S. Reclamation Service with regard to harbor, flood and reclamation work, proposed by these federal agencies, and their effect upon the State Highway system was continued. Investigations and reports were initiated by this section on proposed public airport improvements and their effect upon state highways; and recommendations were made to the Civil Aeronautics Administration through the Public Roads Administration.

Coordination of the National Forest Highway Programs, involving programming, reconnaissance, study and approval of plans, was handled by the Design Section, which involves liaison with the U. S. Forest Service and Public Roads Administration.

Landscaping and Erosion Control

Erosion control on all highway projects and landscaping treatment on freeways, particularly those in urban areas, are important elements of modern highways planning and improvement. The large investment in a modern freeway development justifies full consideration of these values.

The increase in the number of this type of project as a result of the accelerated highway program placed a heavy burden upon this unit of the Design Section during the fiscal year, since all planting and landscaping plans are prepared in Headquarters, due to the special nature of the work. Careful coordination is required between the various districts and the highway landscape function from the initiation of the project to its final completion.

NATIONAL FOREST HIGHWAY SYSTEM IN CALIFORNIA, JUNE, 1948

No.	Name	Termini	National Forest	Length miles
Forest Highways on State Highway System				
1	Crescent City.....	Forest Boundary near South Fork-Oregon Line.....	Siskiyou, Six Rivers	33.6
2	Klamath River.....	Weitchpec-Mouth of Shasta River.....	Klamath, Six Rivers.....	133.0
3	Trinity River.....	Junction City-Horse Summit.....	Trinity, Six Rivers	63.5
4	Peanut-Van Duzen.....	Peanut-West Forest Boundary.....	Trinity, Six Rivers	34.0
5	Douglas City-Peanut.....	Douglas City-Peanut.....	Trinity.....	30.6
6	Beegum-Peanut.....	Beegum-Peanut.....	Trinity.....	22.0
10	Weed-Medicine Lake.....	U.S. 99 near Weed-North Forest Boundary.....	Shasta.....	14.9
11	Lava Beds.....	Spaulding Ranch-Near Stronghold.....	Modoc.....	30.6
12	Howard Gulch.....	Canby-Spaulding Ranch.....	Modoc.....	17.1
13	Alturas-Cedarville.....	West Forest Boundary-Cedarville.....	Modoc.....	10.2
14	Redding-Alturas.....	Adin-Canby.....	Modoc.....	21.8
15	Redding-Alturas.....	SE. corner National Forest-near Burney.....	Shasta.....	3.5
18	Red Bluff-Susanville.....	12 mi. W. Mineral-East Forest Boundary.....	Lassen.....	36.1
19	Red Bluff-Susanville.....	Near Coppervale-Susanville.....	Lassen.....	15.4
20	Almanor (Sierra Way).....	Almanor Dam-F.H. 22 (Feather River).....	Plumas.....	19.0
21	Deer Creek Meadows.....	Forest Ranch-Deer Creek Meadows.....	Lassen.....	38.0
22	North Fork Feather River.....	Forest Boundary-Quincy.....	Plumas.....	53.4
23	Quincy-Beckwith.....	Quincy-Beckwith.....	Plumas.....	38.3
25	Nevada City-Downieville.....	North San Juan-Downieville.....	Tahoe.....	33.0
26	Yuba Pass.....	Downieville-Sattley.....	Tahoe.....	31.2
27	Sierraville-Hobart.....	Randolph-1.7 mi. S. of Sierra-Nevada County Line.....	Tahoe.....	15.8
28	Calpine-Clio.....	Calpine-Mohawk Valley.....	Tahoe-Plumas.....	7.2
29	Emigrant Gap.....	Near Blue Canyon-Union Mills.....	Tahoe.....	38.7
30	Truckee-Meyers.....	Truckee Junction-U.S. Rte. No. 50.....	El Dorado.....	42.4
31	Tahoe-Brockway.....	Tahoe City-Nevada Line.....	Tahoe.....	11.4
32	Placerville-Lake Tahoe.....	Pollock Pines-Nevada Line.....	El Dorado.....	46.8
33	Carson Pass.....	Cook Station-Willow Creek.....	El Dorado.....	42.5
34	Woodfords-Minden.....	Woodfords-Nevada Line.....	Toiyabe.....	6.0
35	Ebbetts Pass.....	Murphy-Woodfords.....	Stanislaus-Toiyabe	77.0
36	Topaz.....	2 mi. S. of Coleville-Nevada Line.....	Toiyabe.....	11.3
37	Bridgeport-Coleville.....	Bridgeport-2 mi. S. of Coleville.....	Toiyabe.....	30.1
38	Sonora Pass.....	Soulsbyville Junction-U.S. Rte. No. 395.....	Stanislaus-Toiyabe	66.4
39	Big Oak Flat (Tioga).....	Big Oak Flat-Yosemite Park Boundary.....	Stanislaus.....	32.0
40	Tioga.....	F.H. 41 (U.S. Rte. 395)-Yosemite N.P. Boundary.....	Inyo.....	15.3
41	Red Rock-Bridgeport.....	Near Convict Creek-Mono Lake.....	Inyo.....	34.9
42	Red Rock-Bridgeport.....	Approx. 5 mi. N. Inyo-Mono County Line-Approx. 1 mi. W. Rock Creek Inn.....	Inyo.....	7.0
43	Luther Pass.....	Woodfords-U.S. Rte. 50 near Meyers.....	Toiyabe-El Dorado	17.8
45	Mariposa-El Portal.....	Briceburg-Yosemite Park Boundary.....	Sierra-Stanislaus.....	17.8
46	Harmony Ridge.....	West Forest Boundary-U.S. Rte. 40.....	Tahoe.....	16.7
47	Oakhurst.....	Yosemite Park Boundary-Oakhurst.....	Sierra.....	14.8
48	Huntington Lake.....	West Forest Boundary-Huntington Lake.....	Sierra.....	40.0
49	Kings Canyon.....	N.P. Boundary-Deer Cove Creek.....	Sequoia.....	24.6
50	Fresno-Kings Canyon.....	Approx. 5 mi. W. of Deer Park-N.P. Boundary.....	Sequoia.....	12.9
51	Hoopa.....	Willow Creek Junction-Hoopa Indian Reservation.....	Six Rivers.....	8.7
52	Glenville-Kernville.....	West Forest Boundary-East Forest Boundary.....	Sequoia.....	10.0
53	Bakersfield-Freeman.....	Cottonwood Creek-Bodfish.....	Sequoia.....	30.1
54	Cuyama.....	Dutard Ranch-Cuyama River Bridge.....	Los Padres.....	15.4
55	Cuesta Pass.....	Cuesta-San Luis Obispo Creek.....	Los Padres.....	3.6
56	San Marcos.....	Santa Ynez River Bridge-South Forest Boundary.....	Los Padres.....	22.8
57	Ridge Route.....	Castaic-Gorman.....	Angeles-Los Padres	26.9
58	Arroyo Seco.....	La Canada-Red Box.....	Angeles.....	13.1
61	Angeles Crest.....	Red Box-Isip Saddle.....	Angeles.....	30.0
62	San Gabriel.....	South Forest Boundary-Isip Saddle.....	Angeles.....	32.0
63	Swartout.....	Isip Saddle-Highway near Phelan.....	Angeles- San Bernardino	24.0
64	Cajon.....	Devore-near Summit.....	San Bernardino.....	14.8
65	Bear Valley.....	Forest Boundary near Arrowhead Springs-Pine Knot.....	San Bernardino.....	40.3
66	Fawnskin.....	F.H. 65-Sylvan Way via Fawnskin.....	San Bernardino.....	11.0
67	San Luis Rey.....	East Forest Boundary-West Forest Boundary.....	Cleveland.....	4.0
68	Mill Creek.....	Pine Knot-South Forest Boundary.....	San Bernardino.....	40.0
70	Idyllwild-Desert.....	Keen Camp-Coachella Valley.....	San Bernardino.....	37.1
71	Mt. Lassen.....	Southwest Boundary Lassen National Park-Mineral.....	Lassen.....	8.8

NATIONAL FOREST HIGHWAY SYSTEM IN CALIFORNIA, JUNE, 1948—Continued

No.	Name	Termini	National Forest	Length miles
Forest Highways on State Highway System—Continued				
72	Idyllwild	San Jacinto Ranger Station-Keen Camp	San Bernardino	10.0
75	Manzanita Lake	Lassen N.P. Boundary-1 mi. W. of Forest Bdry.	Lassen	4.5
76	Maricopa-Ventura	North Forest Boundary-South Forest Boundary	Los Padres	43.4
77	Mt. Shasta-Mt. Lassen	Mt. Shasta City-NW. Bdry. Lassen N.P.	Shasta-Lassen	91.3
79	Morgan Summit-Morgan Springs	Morgan Summit-Morgan Springs	Lassen	3.8
80	El Cajon-Jacumba	Alpine-La Posta Ranch	Cleveland	27.8
81	Mammoth Lakes	U.S. Rte. 395-McLeod Lake	Inyo	10.7
82	June Lake	U.S. Rte. 395-U.S. Rte. 395 via Silver Lake	Inyo	15.0
84	Morro Bay	East Forest Boundary-West Forest Boundary	Los Padres	3.6
91	Bishop Creek	East Forest Boundary-Sabrina Lake	Inyo	11.0
94	East Walker River	South Forest Boundary-Nevada Line	Toiyabe	8.5
Forest Highways Not on State Highway System				
7	Mendocino Pass	Williams Creek-Mouth of Grindstone	Mendocino	54.0
8	Lucerne-Bartlett	Lucerne Junction-Hough Springs	Mendocino	22.7
16	Willow Creek	Adin-Grasshopper Valley	Modoc	30.0
17	Westwood	State Highway No. 29-Forest Highway No. 92	Lassen	18.0
24	Gold Lake	Graeagle-Yuba Pass Junction	Plumas	15.0
44	Aspen Valley	Big Oak Flat Highway-Bdry. Yosemite N.P.	Stanislaus	2.0
59	Vincent	Vincent-Barley Flat	Angeles	25.0
60	Mt. Wilson	Red Box-Mt. Wilson	Angeles	5.0
72	Idyllwild	Keen Camp-Idyllwild	San Bernardino	5.5
73	Laguna	Laguna Junction-Cuyamaca Lake	Cleveland	25.4
74	North Fork	Oakhurst Junction-F.H. 48	Sierra	26.5
78	Generals Highway	Sequoia Park-General Grant Grove Kings Canyon N.P.	Sequoia	10.4
83	Pine Crest	F.H. 38 (Sonora Pass)-Pine Crest	Stanislaus	0.9
85	Round Lake	U.S. Rte. 50-F.H. 33 (Carson Pass)	El Dorado	11.0
86	Blue Lakes	F.H. 33 (Carson Pass)-F.H. 35 (Ebbetts Pass)	El Dorado-Mono-Stanislaus	18.0
87	Clarks Fork	F.H. 35 (Ebbetts Pass)-F.H. 38 (Sonora Pass)	Stanislaus	21.0
88	Clavey River	F.H. 38 (Sonora Pass)-F.H. 39 (Big Oak Flat)	Stanislaus	30.0
89	Rock Creek	U.S. 395-Rock Creek Lake	Inyo	12.0
90	Western Divide	F.H. 52-Quaking Aspen Meadows	Sequoia	39.0
92	Feather Lake	F.H. 77 (Mt. Shasta-Mt. Lassen Hwy.)-State Rte. 29	Lassen	49.0
93	Salmon River	Somes Bar-Etna	Klamath	60.0
95	Mt. Pinos	U.S. Rte. 99-Bitter Creek Saddle	Los Padres	21.3
96	Mosquito Ridge	Foresthill-Beartrap Saddle	Tahoe	19.2
97	Herring Creek	F.H. 38 (Sonora Pass Hwy.)-Herring Creek Camp	Stanislaus	9.5

Forest Highways on the State Highway System 1,910.8 miles

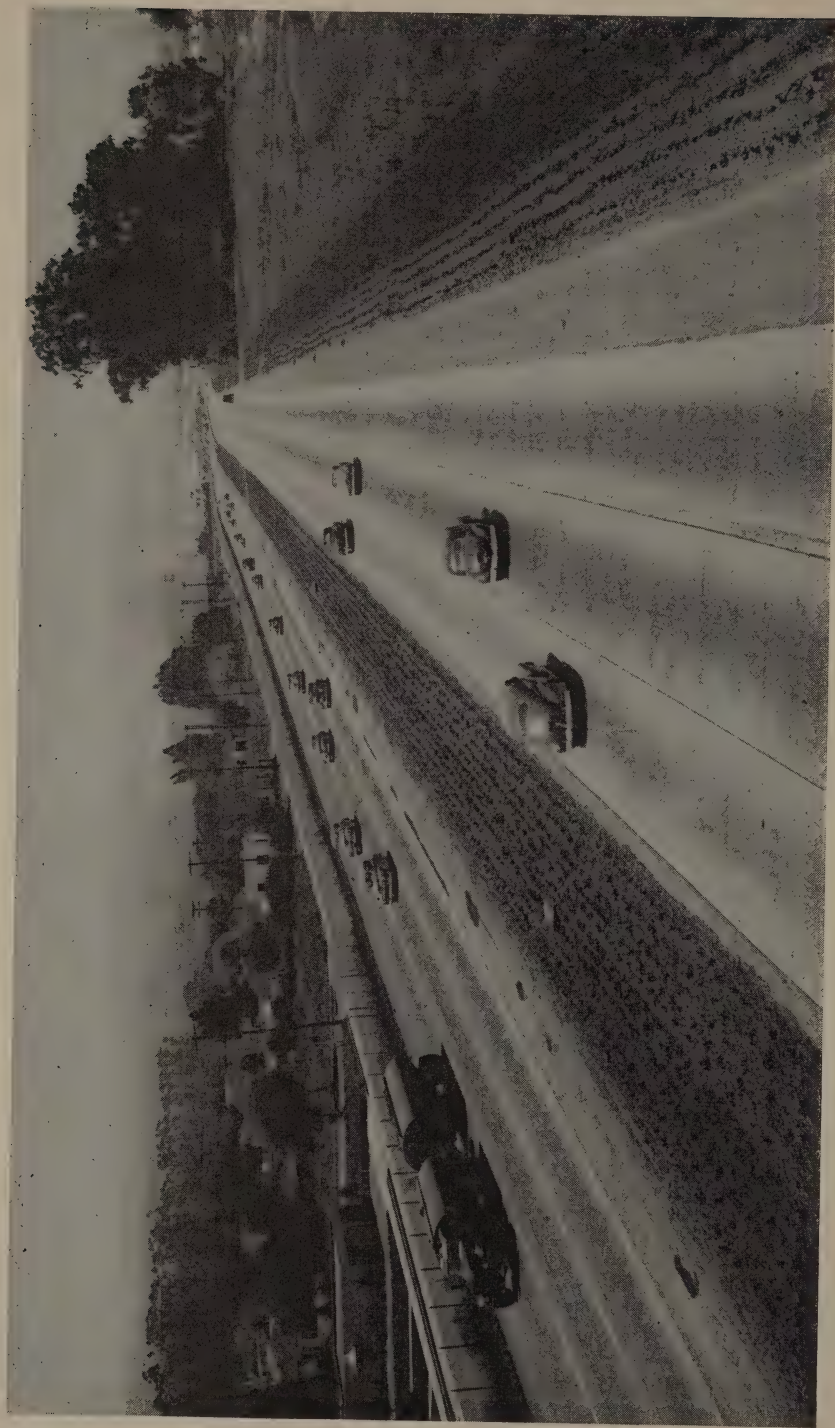
Forest Highways not on the State Highway System 530.4 miles

California Forest Highway System 2,441.2 miles

CONSTRUCTION AND EXPENDITURES BY THE PUBLIC ROADS ADMINISTRATION ON FOREST HIGHWAY
SYSTEM, STATE OF CALIFORNIA UP TO AND INCLUDING FISCAL YEAR 1948

DESIGNATION				STATUS AS OF JUNE 30, 1948					
Rte. No.	Name of route	Termini of projects	County	National forest	Total length of route, miles	Miles built or under construction	Total expenditures	Federal funds	Cooperative funds
1	Crescent City (U.S. 199)	Forest Bdry near South Fork-Oregon Line	Del Norte	Siskiyou-Six Rivers	33.6	26.7	\$1,478,904	\$695,925	\$782,979
2	Klamath River	Weitchpec-Mouth of Shasta River	Humboldt-Siskiyou	Klamath-Six Rivers	133.0	49.7	1,303,350	1,204,788	98,562
3	Trinity River (U.S. 299)	Junction City-Horse Summit	Trinity-Humboldt	Trinity-Six Rivers	63.5	4.8	129,884	129,884	
5	Douglas City-Peanut	Douglas City-Peanut	Trinity	Trinity	30.6	19.8	463,731	463,731	
7	Mendocino Pass	Williams Creek-Mouth of Grindstone	Mendocino-Glenn	Mendocino	54.0	54.0	451,365	416,365	35,000
8	Lucerne-Bartlett	Lucerne Junction-Hough Springs	Lake	Mendocino	22.7	22.7	54,560	47,341	7,219
10	Weed-Medicine Lake (U.S. 97)	U.S. 99 near Weed-North Forest Boundary	Siskiyou	Shasta	14.9	9.9	99,003	99,003	
11	Lava Beds	Spaulding Ranch-near Stronghold	Modoc	Modoc	30.6	30.6	666,432	666,432	
12	Howard Gulch	Canby-Spaulding Ranch	Modoc	Modoc	17.1	17.1	448,741	439,561	9,180
13	Alturas-Cedarville	West Forest Boundary-Cedarville	Modoc	Modoc	10.2	7.7	117,776	58,888	58,888
14	Redding-Alturas (U.S. 299)	Adin-Canby	Modoc	Modoc	21.8	10.9	214,537	214,537	
18	Red Bluff-Susanville	12 mi. W. of Mineral-East Forest Boundary	Tehama-Plumas	Lassen	36.1	24.3	527,634	350,634	177,000
20	Almanor (Sierra Way)	Almanor Dam-F.H. 22 (Feather River)	Plumas	Plumas	19.0	20.8	1,108,971	1,106,861	2,110
21	Deer Creek Meadows	Forest Ranch-Deer Creek Meadows	Butte-Tehama	Lassen	25.9	25.9	912,189	821,548	90,641
22	North Fork Feather River	Forest Boundary-Quincy	Butte-Plumas	Plumas	53.4	5.7	200,700	200,700	
23	Quincy-Beckwourth	Quincy Beckwourth	Plumas	Plumas	38.3	38.3	805,271	551,649	253,622
25	Nevada City-Downieville	North San Juan-Downieville	Nevada-Yuba-Sierra	Nevada-Yuba-Sierra	33.0	6.6	935,001	933,501	1,500
26	Yuba Pass	Downieville-Sattley	Sierra	Tahoe	31.2	31.2	740,453	740,453	
27	Sierraville-Hobart	Randolph-17 mi. S. Sierra-Nevada Co. Line	Sierra-Nevada	Tahoe	15.8	15.8	478,286	476,129	2,157
28	Calpine-Clio	Calpine-Mohawk Valley	Sierra-Plumas	Tahoe-Plumas	7.2	7.2	212,544	212,544	
29	Emigrant Gap (U.S. 40)	Near Blue Canyon-Union Mills	Nevada-Placer	Tahoe	38.7	6.9	246,826	246,826	
30	Truckee-Meyers	Truckee Junction-U.S. Rte. 50	Nevada-Placer-El Dorado	Tahoe	42.4	14.5	494,732	457,303	37,429
31	Tahoe-Brockway	Tahoe City-Nevada Line	Placer	El Dorado	11.4				
32	Placerville-Lake Tahoe	Pollock Pines-Nevada Line	El Dorado	El Dorado	46.8	37.1	2,659,062	2,346,358	312,704
35	Ebbetts Pass	Murphy-Woodfords	Calaveras-Alpine	Stanislaus-Toiyabe	77.0	18.1	362,796	215,586	147,210

36	Topaz (U.S. 395).....	2 mi. S. Coleville-Nevada Line.....	Mono.....	Tiayabe.....	11.3	11.3	515,037	214,237	800
37	Sonora Pass.....	Soulsbyville Junction-U.S. Rte. No. 395.....	Tuolumne-Mono.....	Stanislaus-Tiayabe.....	66.4	29.7	1,034,514	915,375	119,139
47	Oakhurst.....	Yosemite National Park Boundary-Oakhurst.....	Mariposa-Madera.....	Sierra.....	14.8	14.8	391,435	351,435	---
48	Huntington Lake.....	West Forest Boundary-Huntington Lake.....	Fresno.....	Sierra.....	40.0	3.9	43,729	22,225	21,504
50	Fresno-Kings Canyon.....	Approx. 3 mi. W. of Deer Park-Nat'l Park Bdry.....	Fresno-Tulare.....	Sequoia.....	12.9	1.6	202,025	202,025	---
51	Hoopa.....	Willow Creek Jet.-Hoopa Indian Reservation.....	Humboldt.....	Six Rivers.....	8.7	8.7	274,610	274,610	---
54	Cuyama.....	Dutard Ranch-Cuyama River Bridge.....	Santa Barbara.....	Los Padres.....	13.4	15.4	251,792	212,927	338,865
56	San Marcos.....	Santa Ynez River Bridge-South Forest Bdry.....	Santa Barbara.....	Los Padres.....	22.8	16.4	392,853	210,028	182,525
60	Mt. Wilson.....	Red Box-Mt. Wilson.....	Los Angeles.....	Anges.....	5.0	3.0	185,213	185,213	---
61	Anges Crest.....	Red Box-Islip Saddle.....	Los Angeles.....	Anges.....	30.0	13.4	887,571	879,277	8,294
62	San Gabriel.....	South Forest Boundary-Islip Saddle.....	Los Angeles.....	Anges.....	32.0	9.4	1,450,820	278,676	1,172,144
63	Swartout.....	Islip Saddle-Highway near Phelan.....	Los Angeles.....	Anges.....	24.0	7.7	270,681	270,681	---
65	Bear Valley.....	Forest Bdry. near Arrowhead Spgs-Pine Knot.....	San Bernardino.....	Anges-S. Bdm.....	40.3	20.8	1,366,896	690,220	616,676
68	Mill Creek.....	Pine Knot-South Forest Boundary.....	San Bernardino.....	San Bernardino.....	40.0	3.2	222,167	222,167	---
70	Idylwild-Desert.....	Keen Camp-Coachella Valley.....	Riverside.....	San Bernardino.....	37.1	33.2	354,411	338,710	15,701
71	Mt. Lassen.....	SW. Bdry Lassen National Park-Mineral.....	Tehama.....	Lassen.....	8.8	6.0	125,814	100,814	25,000
72	Idylwild.....	San Jacinto Ranger Station-Keen Camp.....	Riverside.....	San Bernardino.....	15.5	15.5	188,084	138,084	40,000
73	Laguna.....	Laguna Junction, Cuyamaca Lake.....	San Diego.....	Cleveland.....	25.4	25.4	465,497	430,497	25,000
74	North Fork.....	Oakhurst Jet.-Auberry (F.H. 47 to F.H. 48).....	Madera-Fresno.....	Sierra.....	26.5	4.3	237,570	237,570	---
75	Manzanita Lake.....	Lassen Nat'l Park Bdry-1 mi. W. of Forest Bdry.....	Shasta.....	Lassen.....	4.5	4.5	102,372	102,372	---
76	Maricopa-Ventura (U.S. 399).....	North Forest Boundary-South Forest Boundary.....	Ventura.....	Los Padres.....	43.4	25.7	1,149,576	335,202	814,374
77	Mt. Shasta-Mt. Lassen.....	Mt. Shasta City-NW. Bdry. Lassen Nat'l Park.....	Siskiyou-Shasta.....	Shasta-Lassen.....	91.3	81.1	1,789,323	1,706,777	22,546
78	Generals Highway.....	Sequoia Park-General Grant Grove, Kings Canyon N.P.....	Tulare.....	Sequoia.....	10.4	---	---	---	---
79	Morgan Summit-Morgan Springs.....	Morgan Summit-Morgan Springs.....	Tehama.....	Lassen.....	3.8	3.8	115,386	115,386	---
81	Mammoth Lakes.....	U.S. Rte 395-McLeod Lake.....	Mono.....	Inyo.....	10.7	9.0	231,656	231,656	---
83	Pine Crest.....	F.H. 38 (Sonora Pass)-Pine Crest.....	Tuolumne.....	Stanislaus.....	0.9	0.9	32,297	32,176	121
84	Morro Bay (U.S. 466).....	East Forest Bdry-West Forest Bdry.....	San Luis Obispo.....	Stanislaus.....	3.6	3.6	128,052	128,052	---
87	Clarks Fork.....	F.H. 35 (Ebbetts Pass)-F.H. 38 (Sonora Pass).....	Tuolumne-Alpine.....	Stanislaus.....	21.0	9.2	345,462	345,462	---
93	Salmon River.....	Somes Bar-Etna.....	Siskiyou.....	Klamath.....	60.0	17.0	571,270	500,241	71,029
95	Mt. Pinos.....	U.S. Rte 99 (near Lebec)-Bitter Creek Saddle.....	Mt. Ventura.....	Los Padres.....	21.3	2.7	162,000	102,000	---
96	Mosquito Ridge.....	Foresthill-Beartrap Saddle.....	Placer.....	Tahoe.....	19.2	14.5	119,866	979,902	214,964
Totals.....		---	---	---	1,637.3	924.0	\$30,025,427	\$24,320,544	\$5,704,883



RECENTLY COMPLETED SIX-LANE BAY SHORE FREEWAY in San Mateo, U. S. 101 By-Pass

TRAFFIC

The traffic section continued its basic activities established prior to the change in division organizational set-up, with somewhat more clearly defined assigned duties.

Geometric Design

The geometric design features of proposed projects are studied to a far greater extent than in previous years with a view toward developing superior facilities for the safe and efficient movement of traffic.

More extensive use is made of origin-destination survey data to evaluate traffic service on proposed alternate routes and by-passes of smaller cities. This is in addition to origin and destination surveys of metropolitan areas. The data obtained by these studies facilitate evaluation of service to local traffic, as well as through traffic, and results in the selection of routes that will provide the greatest over-all benefit to those who use the highway.

Traffic Accident Records

During the year, special series of investigations of accident records were made, studying the several types of highway median strips commonly in use to determine the best types under various conditions and volumes of traffic.

Traffic Regulation

General specifications for traffic signals and highway illumination have been adopted. Under these, plans for over 100 signal systems on state highways and 30 signal systems on major streets were approved. Fifty highway illumination systems other than at signalized intersections were approved.

Traffic engineering studies and surveys for 200 speed zones were made and orders prepared establishing the zones.

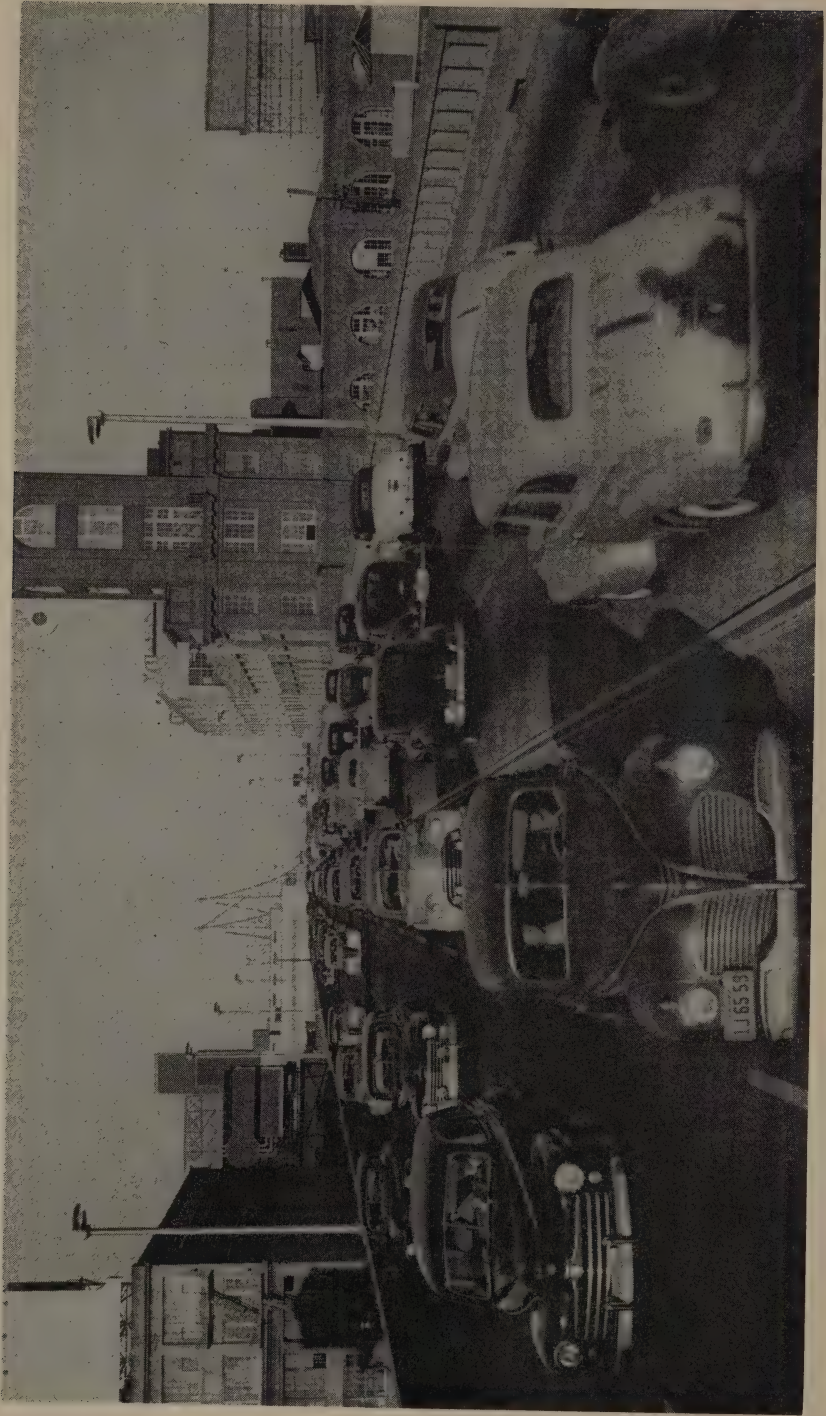
Approximately 1,200 requisitions for signs were reviewed and approved.

PLANNING SURVEY

Work of the State-wide Highway Planning Survey centered largely on the study of traffic movements in metropolitan areas.

Traffic Movement Studies

Compilation of data on traffic movement involved calling at a representative number of dwellings and interviewing the inhabitants as to the origins and destinations of trips made on the day immediately preceding the call. To supplement the information relative to travel of residents of the area, vehicles were stopped at all the major entrances to the metropolitan area to determine their origins and destinations. In the San Francisco Bay Metropolitan Area, where field interviewing was completed in June, 1947, 27,700 dwellings were visited and 73,000 inhabitants interviewed. From these interviews it was estimated that in the Bay area



TRAFFIC ON SAN FRANCISCO APPROACH TO SAN FRANCISCO-OAKLAND BAY BRIDGE

3,500,000 trips occur daily via auto, bus, streetcar or taxi. District IV and the City and County of San Francisco were given the data accumulated from this survey for study and use.

A similar survey began in the Sacramento area in November. Field work was finished in May. The residents of 7,718 dwellings were interviewed. Both the San Francisco and Sacramento surveys indicated five to six trips per dwelling daily. This is in close agreement with similar studies throughout the United States.

District Studies

Assistance was given to districts making origin-destination studies where drivers were questioned en route. In June, a major study, covering Routes 2 and 60 from San Diego to Long Beach began. This study will be completed in 1948.

Noteworthy perhaps in the remainder of the work, which was largely routine, was the opportunity to cooperate in establishing the system of maintained county roads as required by the Collier-Burns Highway Act of 1947. Maps were prepared showing this system for each of the counties. As the primary systems are established these maps are being refined to distinguish between the primary and secondary systems. Maps showing the primary system were completed for 21 counties.

Also, representatives of the Public Utilities Commission were supplied with data for use in connection with a survey of the railroad grade crossings conducted by this agency.

Loadometer Surveys

The annual loadometer survey was made at 20 stations. A total of 5,032 trucks and combinations were weighed in June as compared with 4,117 in June of the preceding year.

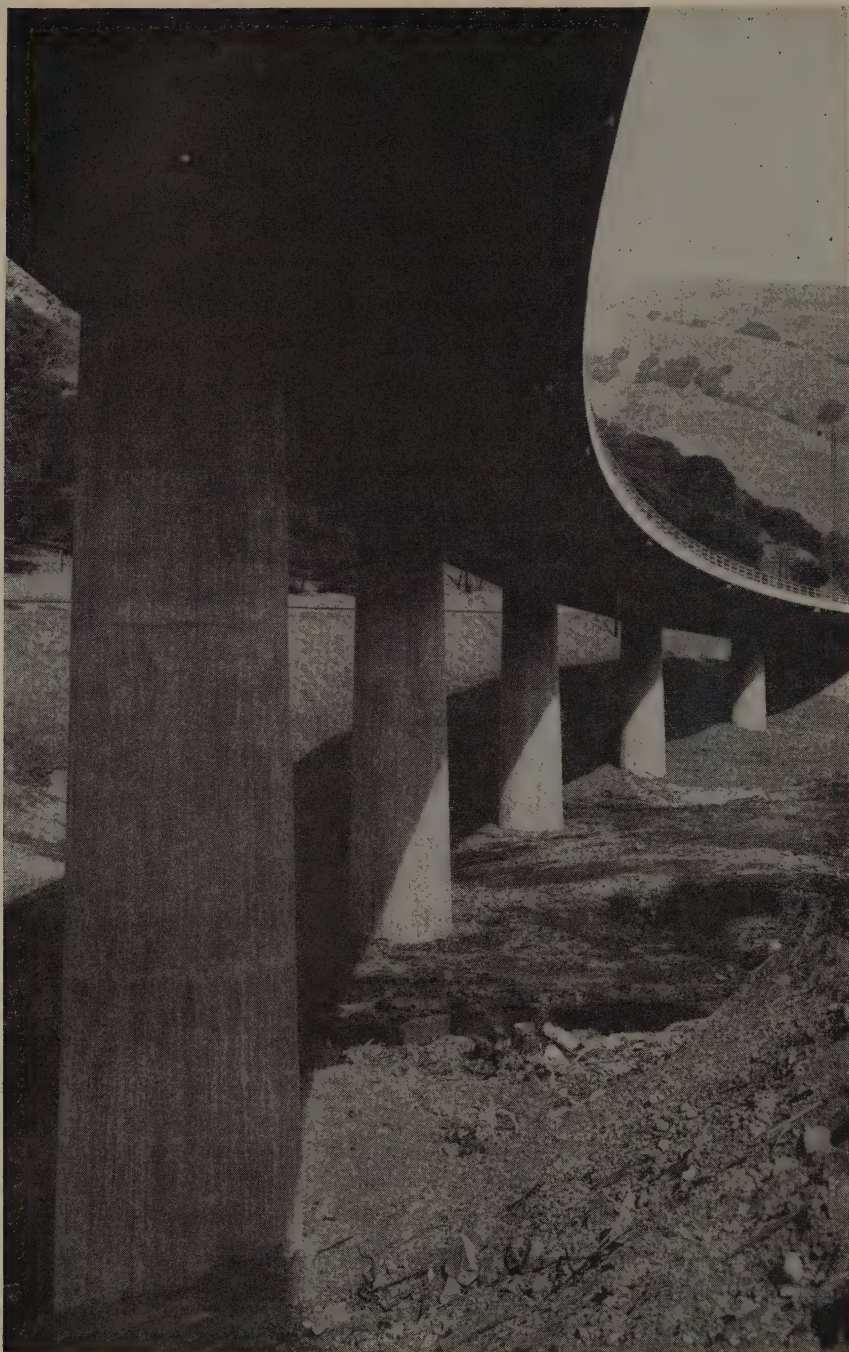
PUBLIC AND EMPLOYEE SAFETY RELATIONS

Many appearances before public groups have been made in the interest of traffic safety, as it is felt that a higher degree of such safety might be obtained through a better understanding of the roadway itself. Traffic engineering and the usage of signs, signals and road markings have been discussed before institutes and in conferences with driver training classes and teacher study groups. Cooperating with the California Highway Patrol Academy a 10-hour course on "Traffic Engineering and the Enforcement Officer" was prepared and presented. This course will be repeated at each subsequent school.

Talks and the presentation of movies, especially for a better understanding of freeways, have been made before numerous service clubs and civic groups.

The employee safety program has been active. A detailed study was made of the record of each employee and equipment accident. Accident prevention procedures have been developed from these accident analyses. Inspection of physical properties and observation of working practices have been made for compliance with the Labor Code and the orders of the Division of Industrial Safety.

Much publicity in posters, newsletters, safety data and bulletins has been used to create and maintain a safety consciousness among the division's employees.



REINFORCED CONCRETE BRIDGE on single column bents across Alameda Creek
between Niles and Sunol, Alameda County

BRIDGES

Following a rapid climb during the first two postwar years, bridge design and construction during the 1947-48 Fiscal Year generally leveled off at the high rate attained by the end of the previous year. However, because the award of contracts financed from the 1948-49 Fiscal Year was advanced to April 1st, while the construction program for the previous year was still in full swing bridge construction is still increasing both in volume and number of contracts with an all time high anticipated in the fall.

The total value of the 106 bridge contracts completed during the fiscal year July 1, 1947, to June 30, 1948, was over \$23,000,000. As of June 30, 1948, there were 80 bridge contracts under way amounting in total value to almost \$21,000,000 and in addition approximately \$6,000,000 in bridges were included in 30 going road contracts. Designs are now complete for structures not yet let to contract, but estimated to cost \$18,000,000.

Bridge department personnel averaged 335 during the year varying from a low of 310 to a maximum of 365.

Details covering the various sections and activities of the department are given in the following paragraphs.

PRELIMINARY INVESTIGATION FOR BRIDGES

The Preliminary Investigation Section acquires bridge site data and prepares the preliminary bridge reports. These reports cover hydrographic, hydraulic, topographic and foundation data upon which structure design is based.

During the last fiscal year, this section completed reports for all structures in the 1948-49 Fiscal Year budget with the exception of four projects, on two of which right of way difficulties did not permit field investigation prior to June 30, 1948. Reports have also been completed for approximately 30 percent of the structures in the 1949-50 Fiscal Year program.

In addition to its work on state highways, the section has made several foundation studies for county bridges on the Federal Aid Secondary System.

BRIDGE DESIGN

During the year the Design Section completed plans for structures included in the 1947-48 budget and as of June 30th were approximately 90 percent complete on design of structures in the 1948-49 budget. Rising costs and increased width of structures, which tend to reduce the number of structures being designed, has been somewhat offset by the greater number of maintenance jobs now being done by contract.



SANTA FE RAILWAY UNDERPASS at Minkler, Kern County on U. S. 99



REINFORCED CONCRETE ARCH BRIDGE across Hare Creek near Ft. Bragg,
Mendocino County

In addition the checking of shop plans on the large number of steel structures under construction, which during the last year has included contracts for four movable bridges, has required considerable time on the part of the design force.

The crowded condition of the design section has been considerably relieved by the acquisition of the newly built sixth floor of the Public Works Building. Other portions of this section continue to operate in the basement and on the third floor of the same building.

In connection with reorganization of the section during the year a subsection concerned only with preliminary design was instituted. This section's primary function is selection of economic bridge types, however, these preliminary designs have the further advantage of providing early estimates for budget purposes. In economic studies the effect of shortages in some structural materials causing delivery delays, coupled with rising labor costs which affect unequally the prices of the various structural materials, have altered some former ideas on economical type selection.

Major freeway structures for the Los Angeles and San Francisco Bay metropolitan areas continue to represent a relatively large percentage of the design load. In the last year structure design for freeway projects in the Santa Cruz and Stockton areas were also completed. The design of structures to parallel existing facilities is becoming increasingly prevalent on the expanding mileage of divided highways where the old highway and structures are used for travel in one direction and the new construction provides for opposing traffic.



REINFORCED CONCRETE BRIDGE ACROSS CHINO CREEK, Riverside County



STEEL UNDERCROSSING on East Shore Freeway at 19th Avenue, Oakland, Alameda County, pedestal pier construction



SOUTHERN PACIFIC R. R. UNDERPASS at Bailey Hill, Siskiyou County on U. S. 99, during construction

BRIDGE CONSTRUCTION

Bridge construction during the year continued to increase steadily. With the effects of the long range expansion program under the Collier-Burns Act becoming increasingly evident, and the federal aid secondary program maintaining its rate of activity, construction personnel of the Bridge Department had to be increased to cover all the going projects. Indicative of the larger volume of work is the fact that from a maximum of 70 bridge contracts under way in the previous year, the top figure this last year reached 91.

From a personnel standpoint the department has been fortunate that considerable interest has been shown in its work by men from out of the State, a number of whom have come to California to accept positions. However, the need for men continues to exceed the supply. It is anticipated that near the end of the 1948-49 Fiscal Year, the crest of the production curve will be approached and from there on it may be possible to continue at a more even rate.

The spiral of increasing prices continued during the year and bid prices on bridge construction, following the same trend, continued to rise. Although by this time a number of the shortages are supposed to be somewhat relieved, it is still necessary to make allowances for delays in delivery in evaluating the time to be allowed for construction work. Steel deliveries were generally slow and the procurement of certain timber materials is also difficult. The majority of contracts still seem to be exceeding their allotted time, principally because of the shortages of men and materials.

There were a large number of structures completed during the year, ranging in size from small bridges spanning irrigation ditches to large, sweeping overheads clearing city streets and several railroad tracks.

In the San Francisco Bay region three large structures were completed. As a portion of the new Eastshore Freeway through lower Oakland, the Fifth Avenue overhead was constructed, spanning both the Southern Pacific and Western Pacific tracks, as well as Fifth Avenue. Eliminating a number of sharp curves and a narrow bridge, a distinctive concrete structure on single-column piers was completed over Alameda Creek in Niles Canyon. The third structure carries the Bayshore Freeway traffic under Santa Clara Avenue, the main street in San Jose.

In Los Angeles a large number of freeway structures were completed this year and many more are under way. On the Terminal Island Freeway, the Nicholson Avenue, Anaheim Street and Union Pacific overhead structures were completed. Spanning the Arroyo Seco Parkway, adjacent to the four-level structure now under construction at the intersection of Hollywood and Harbor Parkways, the Sunset Boulevard overcrossing was completed this year. Elsewhere in the Los Angeles area there were 15 other bridges completed during the year just passed.

The Balboa Parkway in San Diego received a most important addition in the completion of the Mission Valley interchange structures.

In addition to the structures under construction in connection with freeway work, a large number of bridge contracts of all sizes are scattered

throughout the State. As previously stated, this increased activity now finds the Bridge Department with a greater number of going contracts than ever before in its history. Along the north coast are the structures at the Navarro and Noyo Rivers. At Redding a new plate girder bridge is under way to replace the light steel truss spanning the Sacramento River on Route 20. The Bailey Hill underpass, on the Pacific Highway in Siskiyou County near the Oregon Line, also is nearing completion. A new swing bridge is replacing the ferry at the Sacramento River crossing at Butte City. Structures on both the Eastshore Freeway in Oakland and the Bayshore Freeway south of San Francisco, are progressing rapidly. New structures on U. S. 99 are being built near Bakersfield and at Fresno and the construction work on the structural phases of the various freeways in Los Angeles are continuing out ahead of roadway work to provide the necessary crossings when the freeways are graded.

A number of federal aid secondary projects are being built on county roads, many with the aid of construction engineering personnel from the various counties.

BRIDGE MAINTENANCE AND RESEARCH

Maintenance of 4,640 structures on the State Highway System, plus 50 bridges on state park roads, is the primary function of the Maintenance and Research Section. The Collier-Burns Act, in making the Division of Highways responsible for maintenance of state highways through incorporated cities, added 335 structures which prior to January 1, 1948 were maintained by the cities. Maintenance repairs, painting, and minor replacements in the 1947-48 Fiscal Year totaled \$325,000.

Elimination of posted bridges during the year has effected a reduction of 38 in the number of posted structures. As of June 30, 1948 there remained on the state highways 169 structures posted for load or load and speed and 122 structures posted for speed alone.

Investigations of county and city bridges for the purpose of determining structural capacity are made by this section upon formal request by the body having jurisdiction. During the last year 90 such structures were investigated, 51 of which were posted for reduced load limits. In addition, work is now under way on requests from three counties which involve the investigation of 360 bridges.

RAILROAD GRADE SEPARATIONS AND CROSSING PROTECTION

As of June 30, 1947, there were 25 railroad grade separations under construction throughout the State. During the year 11 of these separations were completed and contracts awarded for 12 additional separations, making a total of 26 railroad-highway separations under construction on June 30, 1948.

Of the 12 separation contracts awarded during the past year, three eliminate existing grade crossings, two are for the replacement of existing separations, and the remaining seven represent separation of crossings on new highway alignment. Under provisions of the 1944 Federal Aid Highway Act the railroads are contributing 10 percent of the cost for two of the separations which eliminate existing crossings.



STEEL GIRDER OVERPASS at Salsipuedes Street in Santa Barbara,
U. S. 101, during construction



STEEL GIRDER UNDERCROSSING on East Shore Freeway at 23d Avenue,
Oakland, Alameda County, under construction

The program for installation of flashing light signals financed by federal aid grade crossing funds, 1943 Fiscal Year, is not yet complete. Nineteen installations were completed during the year, leaving eight projects in the program to be completed.

A program for the installation of flashing light signals at 64 crossings on the Federal Aid Secondary System was given approval during the year. Agreements have been executed for 50 of these installations and eight were reported complete by June 30, 1948.

FEDERAL AID SECONDARY COUNTY BRIDGES

The federal aid secondary program for improvement to county roads continued during the year. The Bridge Department continued its cooperation with the counties on the design and construction of the bridges programmed.

During the year there was in progress a total of 35 contracts distributed among 24 counties. These contracts involved the construction of 55 bridges at an estimated cost of about \$4,390,000.



STEEL GIRDER UNDERCROSSING on East Shore Freeway at
29th Avenue, Oakland, Alameda County, under construction

Twenty-two of the contracts, located in 15 counties and involving the construction of 33 bridges at an estimated cost of about \$2,212,000, were completed during the fiscal year.

The counties utilized their own forces or employed consultants in the design of the structures for 28 of the projects. The Bridge Department has endeavored to work with the counties as closely as possible in the design stage, giving them assistance wherever requested.

The counties furnished the engineering personnel for manning 19 of the projects, the Bridge Department furnished the personnel for the remaining 16. On practically all projects, however, the counties have continued to furnish crews for staking out the structures.

**BRIDGES ON THE STATE HIGHWAY SYSTEM SEGREGATED AS TO
NUMBER, LENGTH AND AREA BY STRUCTURE TYPE
(As of June 30, 1948)**

Structure type	Number	Length (feet)	Area (square feet)
Concrete arch	274	42,609	949,944
Concrete girder	932	141,673	6,700,459
Concrete slab	1,369	70,063	2,509,111
Masonry arch	46	1,496	31,768
Subtotal: Concrete and masonry	2,621	255,841	10,191,282
Steel arch	4	1,618	25,194
Steel plate girder	71	61,959	1,042,222
Steel stringer	241	45,934	1,713,792
Steel deck truss	29	20,579	1,104,718
Steel pony truss	48	15,697	195,578
Steel thru truss	98	77,705	1,436,201
Suspension	5	16,100	898,991
CMP multiplate and arch	39	825	27,622
Subtotal: Steel	535	240,417	6,444,318
Timber arch	6	1,434	11,306
Timber stringer	1,164	81,337	3,536,305
Timber deck truss	26	7,718	71,144
Timber pony truss	18	5,065	81,579
Timber thru truss	15	5,201	44,690
Subtotal: Timber	1,229	100,755	3,745,024
Total bridges	4,385	597,013	20,380,624
Underpasses	151		
Overheads*	86		
Combined bridge and overhead*	27		
State highway separations*	16		
Road overcrossings	68		
Road undercrossings*	58		
Pedestrian overcrossings	18		
Pedestrian undercrossings*	96		
Tunnels	16	11,476	
Retaining walls	11	14,318	
Miscellaneous	18	177	
Total structures	4,667	622,984	

* Separations so noted are listed under structure type above.

NOTES—List includes all structures on the State Highway System including the San Francisco-Oakland Bay Bridge. Complex structures are listed as to number and length on basis of main span but areas have been broken down and appear under the various types involved. Area based on clear roadway width including sidewalks.

SAN FRANCISCO-OAKLAND BAY BRIDGE AND CARQUINEZ BRIDGE OPERATION AND MAINTENANCE

San Francisco-Oakland Bay Bridge

Traffic and Revenue—The total number of vehicles which crossed the San Francisco-Oakland Bay Bridge between July 1, 1947, and June 30, 1948, was 25,981,259, a gain of 1.84 percent as compared to the 25,511,724 vehicles of the previous fiscal year. The daily average was 70,987 vehicles.

A total of 24,808,988 toll-paying interurban train and bus passengers crossed the bridge during the year, a decrease of 10.03 percent as compared with the preceding year.

Revenue derived from vehicular tolls, interurban train passenger tolls, rents, interest, and miscellaneous services (exclusive of collections for roadside and tow services) amounted to \$8,260,453.19.* This was an increase of \$161,542.09 as compared with the previous fiscal year.

No changes in toll rates were made during the year.

Financing—Bond retirements during the year totaled \$7,175,000, of which \$2,195,000 represented bonds maturing on September 1, 1947, and March 1, 1948, and \$4,980,000 represented sinking fund bonds called in advance of their maturity dates. The bonded indebtedness at the end of the fiscal year was \$35,040,000.

Bridge Maintenance—The bridge painting crew consisted of two foremen, two leadingmen, and an average of 39 painters, two laborers, and two highway equipment operator-laborers. A pilot section of 1,500 feet of track was erected on the underside of the upper deck for the support of a specially designed traveling platform for use in painting the upper-deck floor system. Special traveling scaffolds for painting the web system of the West Bay stiffening trusses and the main cables of the suspension bridges were placed in service. The total amount expended on painting, including scaffolds, traveling platform, and track was \$266,161.47.

Because the large volume of vehicular traffic was maintained during the year, it was necessary to continue the emergency service fleet at the same size as during the preceding year. In addition to the tow trucks on call at fixed stations, emergency service pickup trucks continued to patrol the bridge deck during the peak hours. The emergency service vehicles were operated under the immediate control of a highway maintenance leadingman who was in constant contact with the various units by means of the two-way frequency-modulated radio telephone system installed in the preceding year.

Structure Maintenance—No unusual problems of structural maintenance occurred during the year.

Traffic Studies—Traffic lane counters were continued in operation for about one week in every month as had been the practice in the preceding year. The special field studies on vehicle speed and placement, which

* Includes \$10,000.00 received in compromise and settlement of suit of California Toll Bridge Authority vs. Sacramento Northern Railway.

were in progress at the end of the preceding year in cooperation with the Public Roads Administration and the Headquarters Traffic Engineer, were completed in July, 1947.

Toll Collection—In order to serve the continuing large volume of traffic, the toll collection force was kept at about the same size as during the preceding year.

The construction of a fill to the north of the Administration Building to provide space for additional toll lanes for westbound lower-deck traffic was completed during the winter of 1947 and 1948. The contract for the construction of the toll booths was awarded on July 22, 1948.

Bridge Approaches—The contract for additional roadway lanes between the Toll Plaza and the Distribution Structure in Oakland was completed in the fall of 1947. These additional lanes removed a previously existing bottleneck in the east approach to the Bay Bridge Toll Plaza.

Accounts Audited—The San Francisco-Oakland Bay Bridge accounts for the fiscal year ended February 29, 1948, were audited and found in good order.

Tabulations—Data on bridge traffic, revenues, and finances are shown in the accompanying tabulations.

TABLE I—SAN FRANCISCO-OAKLAND BAY BRIDGE
EXPENSE OF MAINTENANCE AND OPERATION
Fiscal Year, July 1, 1947, to June 30, 1948

Administration expense.....	\$37,718 50	
Supervising engineer and staff (maintenance).....	26,073 55	
Bridge structure, maintenance and repair.....	11,493 71	
Painting, maintenance and repair.....	266,161 47	
Roadway, fire and tow service.....	107,364 63	
Electrical energy, power and light.....	13,180 47	
Electrical and signal, maintenance and repair.....	52,461 05	
Administration building, maintenance and repair.....	20,560 60	
Roadway, maintenance and repair.....	33,149 80	
Shop and garage.....	6,646 19	
Toll collection.....	305,854 53	
Accounting office, staff and supplies.....	82,261 81	
Auditing.....	2,005 63	
Printing.....	11,442 17	
Traffic engineering.....	14,353 56	
		\$990,727 67
Insurance		
Bridge structure and physical damage.....	\$112,778 40	
Bonding and burglary.....	537 05	
Compensation.....	4,728 99	
Retirement.....	54,648 00	
		172,692 44
Suspense items to be rebilled or transferred.....		—1,714 92
Totals.....		\$1,161,705 19

**TABLE II—SAN FRANCISCO-OAKLAND BAY BRIDGE
FINANCIAL AND REVENUE ACCOUNT**

Revenue

	Fiscal year July 1, 1947 to June 30, 1948	To date Nov. 12, 1936 to June 30, 1948
Traffic tolls.....	\$7,713,880 38	\$67,008,156 87
Train passenger tolls.....	290,851 32	4,295,597 10
Total toll revenue.....	\$8,004,731 70	\$71,303,753 97
Rents from concessions.....	165,721 49	1,067,928 21
Investment and profit, reserve and maturity fund investments.....	80,000 00	644,083 22
Interest on time deposits.....	00	37,806 79
Over and short account.....	—190 11	4,431 97
	\$8,250,263 08	\$73,058,004 16
Commute suspense.....	—5,316 00	9,594 00
Scrip suspense.....	332 75	7,449 05
	\$8,245,279 83	\$73,075,047 21
Balance June 30, 1947.....	6,968,772 00	00
	\$15,214,051 83	\$73,075,047 21

Disbursements

	Fiscal year July 1, 1947 to June 30, 1948	To date Nov. 12, 1936 to June 30, 1948
Interest paid on outstanding bonds.....	\$894,926 95	\$24,449,998 19
Bonds redeemed.....	7,175,000 00	37,500,000 00
Redemption premium on bonds.....	149,400 00	3,940,470 00
C. T. B. A. expense.....	00	153,478 68
Fiscal agents' expense.....	24,001 94	242,257 60
Transfer from American Trust Company (refinancing).....	00	—107,643 26
Registration, paying and collection agents' expense.....	9,213 54	106,278 13
Use and occupancy insurance.....	00	225,794 01
Counterfeits, mutilated coins and uncollectibles.....	9 30	1,555 18
From construction fund.....	—10,000 00	*—429,166 67
Miscellaneous revenue adjustments.....	00	20,525 25
	\$8,242,551 73	\$66,103,547 11
Funds on hand June 30, 1948		
Accounts receivable.....	\$134,630 12	\$134,630 12
Cashier's revenue fund.....	31,162 99	31,162 99
Cashier's change fund.....	20,000 00	20,000 00
	\$185,793 11	\$185,793 11
Funds in hands of fiscal agents		
Anglo California National Bank.....	\$1,350,851 47	\$1,350,851 47
Bank of America, N. T. & S. A.	1,434,855 52	1,434,855 52
	\$2,785,706 99	\$2,785,706 99
Investments		
2 percent treasury bonds.....	\$4,000,000 00	\$4,000,000 00
Total funds on hand June 30, 1948.....	\$6,971,500 10	\$6,971,500 10
	\$15,214,051 83	\$73,075,047 21

* \$10,000 settlement of suit against Sacramento Northern Railway included in this amount to conform to previous reports.

**TABLE III—SAN FRANCISCO-OAKLAND BAY BRIDGE
CONSOLIDATED BALANCE SHEET AS OF JUNE 30, 1948**

Assets		
Current assets		
Cash (available)	\$31,162	99
Cash (change fund)	20,000	00
Construction fund (State treasury)	2,578	27
Toll revenue fund (fiscal and subfiscal agents)		
Anglo California National Bank	1,350,851	47
Bank of America, N. T. & S. A.	1,434,855	52
Investments		
2 percent U. S. Treasury bonds	4,000,000	00
Accrued interest	23,260	73
Accounts receivable	\$111,371	61
Accounts receivable (train passengers)	23,258	51
Credit account deposits	38,831	00
		\$7,036,170 10
Fixed assets		
Investment in bridge (vehicular)	\$54,768,809	10
Investment in bridge (interurban)	18,318,305	81
Investment in bridge (Port of Oakland overhead)	443,508	44
Investment in bridge (improvement in facilities)	477,916	35
	\$74,008,539	70
Retirement of fixed assets		
Vehicular	\$101,986	60
Interurban	3,373,923	21
	—3,475,909	81
		70,532,629 89
Deferred charges		
Prepaid use and occupancy insurance		43,066 74
Total assets		\$77,611,866 73
Liabilities and Excess		
Fixed liabilities		
Bonded debt		
Sinking fund, 1¾ percent	\$5,445,000	00
Serial revenue, 2 percent	25,025,000	00
Serial revenue, 3¾ percent	4,570,000	00
		\$35,040,000 00
Deferred liabilities		
Scrip suspense	\$7,449	05
Commute suspense	9,594	00
Accrued interest on bonds, 1¾ percent	\$31,589	46
Accrued interest on bonds, 2 percent	165,926	10
Accrued interest on bonds, 3¾ percent	56,814	18
Accrued expenses	7,389	75
		278,762 54
Construction fund		2,578 27
Liability for credit account deposits		38,831 00
Total liabilities		\$35,360,171 81
Excess of assets over liabilities		42,251,694 92
		\$77,611,866 73

TABLE IV—SAN FRANCISCO-OAKLAND BAY BRIDGE
CLASSIFICATION OF VEHICLES

Period	Automobiles, automobile trailers and light commercial vehicles		Busses	Trucks and truck trailers	Motorcycles and triars	Total toll vehicles	Free vehicles	Total vehicles
	Cash toll	Commuters						
November 12, 1936 to June 30, 1946	120,419,145	14,410,465	3,628,327	8,978,232	479,778	147,915,947	9,447,886	157,363,833
July 1, 1946 to June 30, 1947	20,144,171	2,173,566	580,637	1,708,660	77,208	24,684,242	827,482	25,511,724
July, 1947	1,750,686	176,523	48,729	151,657	7,246	2,134,841	59,940	2,194,781
August, 1947	1,827,636	170,066	48,359	153,242	7,263	2,206,566	57,532	2,264,098
September, 1947	1,811,138	170,708	47,887	154,477	7,064	2,191,274	57,136	2,248,410
October, 1947	1,767,697	216,272	49,814	168,561	6,291	2,208,635	63,571	2,272,206
November, 1947	1,665,742	192,531	43,598	143,699	4,967	2,050,537	54,344	2,104,881
December, 1947	1,683,115	195,268	46,572	155,635	4,261	2,084,851	58,326	2,143,177
January, 1948	1,615,966	195,286	44,923	149,223	4,586	2,009,984	60,194	2,070,178
February, 1948	1,583,223	173,287	40,239	137,779	4,441	1,938,969	56,158	1,995,127
March, 1948	1,668,010	219,462	45,714	162,520	4,260	2,099,966	64,899	2,164,865
April, 1948	1,636,370	213,104	42,959	155,165	4,598	2,052,196	62,445	2,114,641
May, 1948	1,732,760	199,769	43,717	153,081	5,775	2,135,102	58,692	2,193,794
June, 1948	1,756,054	181,201	43,663	163,259	5,936	2,150,113	64,988	2,215,101
Totals—July 1, 1947 to June 30, 1948	20,498,397	2,303,477	546,174	1,845,298	66,688	25,263,034	718,225	25,981,259
Totals since opening of bridge on November 12, 1936	161,061,713	18,887,508	4,755,138	12,535,190	623,674	197,863,223	10,993,593	208,856,816

Carquinez Bridge

Maintenance—Structural maintenance, including the maintenance of the marine and aerial signals on Carquinez Bridge, continued under the jurisdiction of the San Francisco-Oakland Bay Bridge organization. Roadway maintenance was handled by District X of the Division of Highways.

The painting of the structure was the principal item of maintenance during the year. During most of the year the painting crew consisted of one foreman and seven painters.

Because of navigation requirements it was necessary to maintain a 24-hour watchman service at the bridge in order to keep navigation lights on at all necessary times and to operate fog signals whenever required.

The total maintenance cost during the year (exclusive of insurance and improvements) was \$62,803.22, of which \$20,000.00 was paid from the State Highway Fund and the remainder from the Carquinez Bridge Revenue Account which was established from Carquinez and Antioch Bridge revenue money remaining after the bridges became toll free on August 1, 1945.

The work of installation of maintenance ladders, walkways and safety railings, which was started under contract in May, 1947, was completed in August, 1947.

Tabulations—Data on the maintenance expenses at Carquinez Bridge and on expenditures from the Carquinez Bridge Revenue Account are furnished in the accompanying tabulations.

**TABLE I—CARQUINEZ BRIDGE
MAINTENANCE EXPENDITURES—STATE HIGHWAY FUND**

July 1, 1947, to June 30, 1948

Administration, engineering and accounting	\$1,025 06
Marine and aerial signals	2,792 78
Bridge structure	474 46
Painting	13,900 35
Building maintenance	1,807 35
Total	\$20,000 00

NOTE—In addition to this amount, \$42,803.22 from the Carquinez Bridge Revenue Account was expended for general maintenance.

TABLE II—CARQUINEZ BRIDGE REVENUE ACCOUNT

Balance June 30, 1947	\$233 528 60
Miscellaneous income	430 00
	\$233 958 60
Expenditures:	
Lift span, Antioch, Work Order COF-6	\$16,051 01
Safety railings, Antioch, Work Order COF-7	4,103 19
Safety railings, Carquinez, Work Order COF-8	17,800 14
Maintenance and operations, Carquinez, Work Order COF-9	42,803 22
	80,757 56
Balance before deducting unexpended balance of current work orders	\$153,201 04
Unexpended balances of current work orders	
COF-5	\$671 03
COF-6	2,148 99
COF-7	231 81
COF-10	2,000 00
COFC-1	6,357 36
	11,409 19
June 30, 1948, balance available for future work orders	\$141,791 85



RECENTLY COMPLETED FOUR-LANE DIVIDED HIGHWAY near Malibu, Los Angeles County, U. S. 101 Alt.

PERSONNEL AND CONTRACTORS PREQUALIFICATION

PERSONNEL

One of the most difficult tasks under the accelerated highway program has been the recruiting of adequate personnel. During the 1947-48 Fiscal Year personnel in the Division of Highways has been increased by approximately 1,200 employees.

The recruiting program has been intensively prosecuted through every possible means. In the absence of civil service eligible lists, the department has recruited by advertisement through the newspapers, national engineering magazines, and by personal interviews with the graduating students in the various accredited California colleges.

The following table will show the comparative number of employees between June 30, 1947 and June 30, 1948:

	6-30-47	12-31-47	6-30-48
Day labor classes-----	2,947	3,073	2,888
Clerical, accounting, Misc.-----	790	843	1,426
Engineering and right of way-----	2,141	2,137	2,745
Total -----	5,878	6,053	7,059

It might be noted that the principal bottleneck in handling the vastly increased program has been engineering personnel. However, the progress made may be noted from the fact that as of December 1, 1945, engineering personnel was slightly over 900 and at the present time is approximately 2,600.

During the calendar year 1947, about 5,300 temporary authorization and certification appointments were made, to cover the net increase of 1,000 employees. The largest number of appointments were temporary authorization employees who qualified in examinations and were appointed under certification and promotions. There were 2,600 separations reported, of which 1,700 were resignations, 600 lay-offs, 93 dismissals, 32 compulsory retirement, 8 disability retirement, 29 deaths, and 25 transfers to other State departments. During 1947 there were 9,875 salary adjustments processed (including salary range changes), 1,148 new workmen's compensation cases reported, 13,001 sick leaves, 2,978 group insurance members, 4,500 probationary reports of performance, and 890 leaves of absence and reinstatements.

The advantages of continuous employment are brought out in a study of the employees' service records. Even without a complete count for those persons with broken service, there are 134 employees who have worked continuously for 30 years, 484 for 25 years, 1,057 for 20 years, 2,028 over 15 years, and 2,700 over 10 years. These figures do not include a total of 1,492 employees whose services might qualify in any one of the groups, but have had broken service records.

Additional personnel relation studies are handled in this department, such as the preparation of factual data for the presentation to

the Personnel Board for salary adjustments, job classifications, and working hours. Miscellaneous contacts with outside agencies are performed. Such a function is in the administration of the Veterans On-The-Job Training Program.

During the past year all employees have been very helpful in the performance of regular assignments, and in addition, in the training of new personnel, all to the end of cooperation in undertaking the largest highway program of the division's history.

PREQUALIFICATION OF CONTRACTORS

As required by law, contractors wishing to bid on public work estimated to cost over \$15,000 must be prequalified. Contractors are required to furnish on a standard form a statement of experience and financial condition. These are reviewed, and on the basis of their finances, experience, equipment, etc., the contractors are given a definite maximum bidding capacity. Contractors are limited to a bidding capacity of not to exceed 10 times the net quick working capital or four times the total net worth, whichever is the smaller. This is the absolute maximum rating, and is further scaled down for lack of experience or equipment.

The following table shows the number of contractors prequalified by the Division of Highways at the present time:

\$1,000,000 and over	137
250,000 to \$1,000,000	187
125,000 to 250,000	347
50,000 to 125,000	382
Up to 50,000	507

SERVICE AGREEMENTS AND MISCELLANEOUS SMALL CONTRACTS

Service agreements and miscellaneous small contracts for clearing right of way, as well as for equipment rental, etc., under Sections 135, 136 and 136.5 of the State Contract Act, have aggregated approximately 1,200 for the past year. These are reflected in the accounting records appearing in Appendix A of this report.

PREVAILING WAGES AND LABOR RELATIONS

Under the prevailing wage law, it is the obligation of all awarding bodies to ascertain the prevailing wages in each community and to write them into contract proposals as the minimum wages. Since the passage of this law and up to the beginning of World War II, it had been the practice of this department to make prevailing wage surveys in each county to determine the wages to be shown in contract proposals. During the war, all wages were determined by federal decree, and such surveys were not required. Since the war, organized labor and the associated contracting industry have entered into wage agreements covering by far the majority of work being performed in the State, with the result that with legal advice the terms of the wages shown in these agreements have

been incorporated in state highway contracts as prevailing. In the meantime, spot checks are made to see that the construction industry is following the wages indicated in the agreements.

BUILDINGS AND PLANTS

Housing has been one of the most difficult situations affecting the Division of Highways, and funds sufficient to provide adequate office space for all employees have not been available.

During the past year, \$2,833,443 was budgeted for office construction, office repairs, maintenance stations, etc. The largest single allotment was for the completion of the district office in Los Angeles, where \$1,805,000 was transferred to the Division of Architecture for the completion of this building which had been started before the war.

During the year, the site for the proposed new San Francisco office building was acquired and the design of the building nearly completed by the Division of Architecture.

The completion of the fifth floor in the Public Works building in Sacramento was made during the past year.

Allotments from the Buildings and Plants Fund for the 1947-48 Fiscal Year totaled \$2,640,176.

RIGHT OF WAY

During the fiscal year July 1, 1947-June 30, 1948, the Right of Way Department has been called upon to process a program both in dollar and parcel volume almost twice the size of any previous one-year right of way acquisition program.

During this same period it has been necessary to work out an entirely new right of way procedure in handling the matter of the adjustment and relocation of public utility facilities to meet requirements of the Collier-Burns Highway Act of 1947.

The reorganization and streamlining of the Right of Way Department carried on during the previous 18-month period, added to the highly satisfactory results obtained from the training program in the junior real property agent classification, has enabled the right of way organization to carry on the greatly accelerated program without any delay whatsoever to the construction schedule and with an absolute minimum of inconvenience to construction operations. Under the training program young men have been brought into the right of way organization, all of whom are veterans of World War II and college graduates, and have been given an intensive training course to fit them for right of way acquisition work.

During the past year, right of way expenditures for the Division of Highways have totaled \$17,652,900—representing a total of 2,342 parcels acquired by negotiation and 90 parcels acquired through trial or stipulated judgments in eminent domain proceedings.

The very low percentage of parcels acquired through condemnation as compared to the total acquired by negotiations should indicate the efficiency of the right of way negotiating staff, especially when it is considered that this organization operates under a very tight pre-appraisal procedure.

This right of way program represents 2,512 separate transactions, the acquisition of a total of 3,943 acres and the handling of approximately 5,000 documents to clear titles in the total number of transactions.

The percentage of overhead to direct payments for land in carrying on this program, including the total overhead involved in condemnation cases, was 7.4 percent.

A very heavy percentage of the total expenditures for right of way acquisition has obviously been invested in the acquisition of right of way for freeway projects in the metropolitan areas, principally San Francisco, Los Angeles and the East Bay area. This acquisition has involved the Right of Way Department, especially because of the still existing acute housing shortage, in a very extensive rental and leasing operation which called for a special section of the Right of Way Department to handle right of way clearance, including the sale of previously acquired

building improvements, excess parcels of land, and the orderly relocation and reestablishment of affected tenants presently occupying state-owned building improvements.

The income from rentals, leases, salvage of buildings, etc., during the year represented a net return to the Division of Highways of \$2,027,000.

The Right of Way Department has rigidly held to the previous policy laid down by Governor Warren, the Director of Public Works and the State Highway Engineer, to the effect that during the remainder of the period of acute housing shortage and regardless of the imperative necessity of freeway construction in metropolitan areas, no tenants of a residential property located within the right of way area would be evicted unless it was definitely established that other housing facilities were available for such tenant. While it has at times been extremely difficult, several hundred families involving a total in excess of 2,500 people have been moved during the past year without a single family or person suffering undue or unnecessary inconvenience.

The most successful phase of this relocation program has been the sale of residential buildings, after proper publicity, through open competitive auction, with the successful bidder being required to take the tenant or tenants in possession of the residential building along with the improvements and permit them to occupy the building in its new rehabilitated location for a minimum period of six months at established OPA rental for comparable properties.

The successful bidder is of course required to furnish a faithful performance bond in the amount of \$1,000 per family and, while it is unfortunately true that over 70 percent of the tenants protected through this procedure sell their rights of occupancy to the successful bidder at a very nominal figure and find other housing accommodations, the Division of Highways has, nevertheless, gone far beyond any reasonable legal requirement in protecting the tenants.

In addition to the huge program of right of way acquisition that has been carried on during the last year for the Division of Highways, the Right of Way Department has continued to function under its agreement with the Public Works Board and has handled all field work in connection with the acquisition of a large number of parcels, including the completion of acquisition of the enlarged Governor's residence site in Sacramento and the purchase of several sites for new institutions, representing the acquisition of 17 parcels having a total value of approximately \$395,000.

It is anticipated that the program of land acquisition for the Public Works Board will be greatly expanded during the coming year.

In addition to right of way there also have been acquired five sites for the Division of Highways, including warehouse, maintenance sites, and convict camps, having a total value of \$106,500.

Although the total right of way program, including work for the Division of Highways, the Public Works Board and the California Toll Bridge Authority, during the 1948-49 Fiscal Year represents almost double the volume of right of way acquisition handled during the 1947-48 Fiscal Year, the continuing policy of expansion and addition of man-

power through the in-training program, has placed the department in the position that there is every confidence that this further accelerated program, representing a total land acquisition expenditure in excess of \$36,000,000 will be effectively accomplished.

It is anticipated that the necessary schedule which the department will maintain will represent by far the largest single year of activities undertaken by any state highway right of way organization in the Nation.

LEGAL

The report of the legal staff for the fiscal year covered by this annual report is to a considerable extent a continuation of the First Annual Report. The 1946-47 Fiscal Year brought legislative activity in connection with the drafting and enactment of the Collier-Burns Highway Act of 1947; the 1947-48 year followed with administrative action required by the new program. The act became fully operative January 1, 1948. For the period preceding its operative date and thereafter, a large amount of work has been necessary in connection with questions of budgetary and fiscal procedure which had to be developed. Also, procedures have had to be initiated under the act in respect to the handling of the utility relocation problems, the maintenance of state highways in cities by the cities, cooperative work with the counties and various other matters.

During the 1947-48 Fiscal Year the Prado Flood Control Dam litigation, which was mentioned in the First Annual Report, was finally settled, after an appeal had been taken by the State. In this settlement the Government paid the State the sum of \$585,000 and is to make an additional payment of \$65,000 for the highways taken or damaged by the federal project. The money will be used towards the relocation of the highways outside of the reservoir area.

In furtherance of the 1947 legislation concerning an additional crossing or crossings of the San Francisco Bay, the Director of Public Works, with the approval of the Governor, has created in the Department of Public Works the new Division of San Francisco Bay Toll Crossings. The legal work for the new division, currently engaged in preliminary studies, has brought forth new and interesting problems.

The volume of condemnation work has shown substantial increase. Attention is being directed to clearing the backlog of accumulated condemnation proceedings so that the way will be open to handling the very large volume of such litigation expected from the increased 1948-49 Fiscal Year right of way budget.

Two appellate decisions rendered during the year are worth noting. The District Court of Appeal, First Appellate District, affirmed the order of the Superior Court of Alameda County granting the State a new trial in the Ocean Shore litigation after an adverse jury verdict. The appeal is now before the Supreme Court.

In a case handled by the Los Angeles office of the Legal Department, *People v. Henderson*, the District Court of Appeal, Second Appellate District, affirmed the judgment of the Superior Court of Ventura County enjoining certain abutting property owners from maintaining a tomato packing shed within the highway right of way. The property owners contended that as the right of way was very wide at that point and the shed did not interfere with the travelled way, they, as owners of the under-

lying fee, had a legal right to utilize the surface. Both the trial and appellate courts held that such use was unlawful, being prohibited by the permit provisions of the Streets and Highways Code.

The former difficulty in obtaining additional legal personnel eased somewhat during the fiscal year. Four new men were employed, all in the position of junior counsel. It is hoped that the examinations recently given by the State Personnel Board will produce sufficient eligibles for further needed expansion, as the growth in the Legal Department is at present disproportionate to the large expansion both in the right of way budget and in the right of way personnel required to handle that budget, as indicated in the Right of Way Department section of this report.

The 1947-48 Fiscal Year witnessed the first of the annual budget sessions of the State Legislature. By reason of action taken by the Legislature, the scope of legislation introduced at the session was narrowly restricted. Among the legislation proposed, however, was a bill authorizing the creation of public districts to furnish mass transportation facilities in metropolitan areas. This proposal, which will undoubtedly be brought up again, includes, among other things, recommendation for installation of rail facilities in freeways. This proposal involves highly complicated legal and engineering problems on which the Legal Department has been and is working in cooperation with the engineering staff.

ACCOUNTING

INCREASED PROGRAM REFLECTED IN EXPENDITURES

Although additional revenues made available for highway purposes by Chapter 11 of the 1947 Special Session of the Legislature are not fully reflected in the 1947-48 Fiscal Year, expenditures of the Division of Highways reached an all time high of \$124,441,923 compared with the previous high figure of \$90,778,171 for the 1946-47 Fiscal Year. A substantial portion of the increase in expenditures was attributable to payments on contracts entered into during the preceding fiscal year. Revenue for the 1947-1948 Fiscal Year amounted to approximately 104 million dollars.

REDUCTION IN INVESTMENT OF CASH SURPLUS

The State Highway Fund's investment in United States Government obligations was reduced during the year from \$35,000,000 to \$10,000,000 which will mature on September 1, 1948, and will not be reinvested. In accordance with the provisions of Section 143.1 of the Streets and Highways Code, contracts budgeted in the 1948-1949 Fiscal Year having a value of \$14,442,000 were awarded between April 1, 1948, and June 30, 1948. This procedure which was available for the first time in 1948 will enable the division to complete a greater portion of the projects budgeted within a fiscal year and will also have the effect of reducing the balance of cash available in the State Highway Fund.

INTERNAL AUDITING

In spite of the continued shortage of candidates for positions in the lower professional accounting classifications, the Internal Audit Section in addition to maintaining a continuous audit of all cash transactions including the reconciliation of revolving funds and the pay roll account at the Headquarters office has been able to make considerable progress in the periodic auditing of the District and Shop offices of the division. In connection with these audits, the Internal Audit Section is also now engaged in making a survey of housing facilities in the various districts.

ACCOUNTING AND FINANCIAL STATEMENTS

Included as Appendix A of this report are statements reflecting the financial condition of the Division of Highways as of June 30, 1948, and tables classifying revenues and expenditures to date and for the year ending June 30, 1948.

APPENDIX A

ACCOUNTING AND FINANCIAL STATEMENTS

1. Statement of Financial Condition as of June 30, 1948.
2. Statement of Income and Expenditures, July 1, 1947—June 30, 1948.
3. Analysis of Income Received by Division of Highways by Fiscal Years to June 30, 1948.
4. Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1948.
5. Expenditures by Division of Highways to June 30, 1948, Classified as to Function.
6. Expenditure by Division of Highways by Fiscal Years to June 30, 1948, Classified as to Location and Purpose.
7. Statement of Expenditures in Counties for Construction, Reconstruction, Improvements, and Maintenance and Contributions Received in Connection therewith, January 1, 1912 to June 30, 1948.
8. State Highway Operating Budget—1947-1948 Fiscal Year Statement of Budgetary Transactions as of June 30, 1948.
9. County Highway Budget Statement of Budgetary Transactions as of June 30, 1948.

STATEMENT OF FINANCIAL CONDITION AS OF JUNE 30, 1948

Proprietary Group

Assets

Cash:		
Cash State	\$772,382 42	
Revolving Fund	2,500,000 00	
	<hr/>	
Less advance to Convict Camp Fund	\$3,272,382 42	\$3,212,382 42
	60,000 00	
	<hr/>	
State Highway Fund:		
In Treasury	\$33,981,419 07	
Warrants receivable	10,454,435 69	44,435,854 76
	<hr/>	
Investments—U. S. Government obligations		10,000,000 00
General Fund appropriation—Chapter 44-1943		12,255 27
Toll Bridge Authority Revolving Fund:		
In Treasury	\$2,927 38	
Reimbursable expenditures	47,072 62	50,000 00
	<hr/>	
Advance to Convict Camp Fund		60,000 00
Court deposits in condemnation proceedings		1,373,970 42
	<hr/>	
Receivables:		
Accounts receivable	\$720,311 71	
Charges in process of billing	93,754 74	
San Francisco-Oakland Bay Bridge approaches	6,288,550 41	
War damage claims	1,103,301 67	8,205,918 53
	<hr/>	
Inventories:		
Stores—Equipment Department	\$541,823 45	
Unapplied materials	1,599,086 52	2,140,909 97
	<hr/>	
Land and buildings	\$6,336,927 29	
Less reserve for depreciation	2,034,025 98	
	<hr/>	
Buildings under construction	\$4,302,901 31	
	3,149,099 31	7,452,000 62
	<hr/>	
Equipment:		
Construction and automotive	\$11,440,810 94	
Less reserve for depreciation	5,112,839 87	
	<hr/>	
Office, shop, and miscellaneous	\$6,327,971 07	
	2,272,859 10	8,600,830 17
	<hr/>	
Suspense and deferred items:		
Building operation suspense	\$7,573 20	
Equipment operation suspense	81,345 68	
Clearing account	1,444,138 77	
Unapplied laboratory charges	118,361 16	
Equipment Department current account	79,986 71	
Advances to Architectural Revolving Fund	1,800 00	
Prepaid Bay Bridge insurance	357,409 14	
Undistributed pay rolls	132,504 45	
Staff pay roll adjustment	—14,611 26	2,208,507 85
	<hr/>	
Federal aid apportionments (contra):		
In process of collection	\$1,083,726 36	
Under agreement	17,050,796 97	
Work programmed and agreements pending	19,277,548 22	
Work to be programmed	863,381 63	38,275,453 18
	<hr/>	
Uncompleted contracts (contra)		59,638,254 31
	<hr/>	
Total assets		<u>\$185,666,337 50</u>

STATEMENT OF FINANCIAL CONDITION AS OF JUNE 30, 1948—Continued

Proprietary Group

Liabilities, Reserves, and Surplus

Liabilities:			
Schedules payable.....	\$10,454,435	69	
Invoice pending—Shops.....	2,611	37	
Sales tax collected.....	26,535	11	
Estimated liability for support of other departments.....	230,000	00	
Retirement contributions due.....	135,762	23	
Employees earned overtime.....	47,792	11	\$10,897,136 51
<hr/>			
Liability for uncompleted contracts (contra):			
State highway budget contracts.....	\$53,695,998	81	
Special budget contracts.....	5,942,255	50	59,638,254 31
<hr/>			
Reserves for:			
Compensation insurance and vacation and sick leave.....	\$1,190,897	56	
Major engineering equipment repairs.....	29,543	73	
Loss on land and buildings.....	59,959	33	
Capitalization of land and buildings.....	235,968	73	1,516,369 35
<hr/>			
Deferred items:			
Uncollected damage claims.....	\$10,721	43	
Uncollected contributions.....	6,683,965	26	
Uncollected war damage claims.....	1,103,301	67	
Uncleared collections.....	772,382	42	
Special deposits towards cost of future projects.....	8,019,399	60	16,589,770 38
<hr/>			
Federal aid allotments (contra).....			38,275,453 18
Accumulated surplus exclusive of investment in highways:			
As of June 30, 1947.....	\$68,938,771	41	
Decrease year ending June 30, 1948.....	10,189,417	64	*58,749,353 77
<hr/>			
Total liabilities, reserves, and surplus.....			\$185,666,337 50
<hr/>			
Total income as shown on Statement of Income*.....			\$1,131,548,216 47
Total expenditures as shown on Statements of Expenditures.....			1,093,032,844 51
<hr/>			
Excess of income over expenditures.....			\$38,515,371 96
Add: expenditures for capital assets, suspense items, and other assets,			
less various reserves:			
Land and buildings.....	\$7,452,000	62	
Equipment*.....	8,600,830	17	
Suspense items, other assets, reserves.....	4,181,151	02	20,233,981 81
<hr/>			
Accumulated surplus†.....			\$58,749,353 77

* Includes \$1,948,211.82 representing expenditures for nonrental equipment originally charged to cost accounts but capitalized by charging the equipment accounts and crediting surplus.

† Accumulated surplus represents excess of income over expenditures on a cash basis without giving effect to liabilities for contracts or other obligations incurred but not yet paid.

Trust Group

Assets

Cash in banks:			
Withheld from contract payments to protect claims.....	\$164,412	70	
Convict Camp Fund.....	20,010	99	
Prisoners' Trust Fund.....	14,839	44	
Cash suspense—District VII.....	34,289	83	
Securities held in trust.....	4,500	00	\$238,052 96
<hr/>			
Funds in State Treasury:			
Unclaimed trust moneys.....			1,049 07
<hr/>			
Total assets.....			\$239,102 03

Liabilities

Liability for:			
Amount withheld from contracts.....	\$168,912	70	
Convict Camp Fund.....	20,010	99	
Prisoners' Trust Fund.....	14,839	44	
Liability for cash in suspense.....	34,289	83	
Canceled checks.....	1,049	07	
<hr/>			
Total liabilities.....			\$239,102 03

STATEMENT OF INCOME AND EXPENDITURES

July 1, 1947—June 30, 1948

Income

Gasoline tax.....	\$68,882,979 17	
Motor vehicle fees.....	7,751,399 08	
Federal Government reimbursements.....	25,855,041 17	
Contributions.....	—4,400,465 80	
Outdoor advertising license fees.....	55,367 80	
Use fuel tax (Diesel).....	3,029,301 52	
Caravan fees.....	138,952 50	
Net earnings on investments.....	572,492 32	
Recoveries—U. S. war damage claims.....	545,926 93	
Franchise taxes—toll ferries.....	600 00	
State General Fund appropriations.....	—487 40	
Transportation tax apportionments.....	4,826,958 30	
Total income.....		\$107,258,065 59

Expenditures

Regular Budget:		
Highway construction, north.....	\$35,004,261 84	
Highway construction, south.....	36,046,545 23	
Cities $\frac{1}{2}$ state highways, north.....	1,985,184 34	
Cities $\frac{1}{2}$ state highways, south.....	4,300,411 53	
Joint highway districts, north.....	73,030 10	
Maintenance.....	15,617,718 55	
City Streets (Section 194-S&H Code).....	8,102,917 93	
Highway planning.....	431,154 60	
Planning surveys.....	366,644 30	
Work for other agencies.....	310,006 55	
Legislative damage claims.....	10,722 58	
Supervision of outdoor advertising.....	55,593 72	
Plants and equipment.....	6,166,393 96	
Reserves and suspense.....	578,606 69	
Administration, State General Fund Departments.....	346,266 90	
Administration, Department of Public Works.....	85,987 11	
Administration, Division of Highways.....	3,367,750 42	
Administration, Division of Contracts and Right of Way.....	125,613 07	
Total regular budget expenditures.....		\$112,974,809 42
Special Budgets:		
Highway construction, north.....	\$396,773 76	
Highway construction, south.....	621,374 39	
Highway construction, feeder.....	1,376,006 88	
Flight strip construction.....	—64 24	
County highway construction.....	9,073,005 32	
Administration, federal—nonhighway.....	17 10	
Toll Bridge Authority Revolving Fund.....	37,500 00	
Total special budgets expenditures.....		\$11,504,613 21
Total expenditures.....		\$124,479,422 63
Excess expenditures over income.....		\$17,221,357 04
Deduct:		
Expenditures for capital assets, suspense items and other assets, less various reserves.....	\$6,745,000 65	
Deduct:		
Surplus arising from capitalization of nonrental equipment previously charged to cost accounts.....	286,938 75	7,031,939 40
Total decrease in accumulated surplus.....		\$10,189,417 64

ANALYSIS OF INCOME RECEIVED BY DIVISION OF HIGHWAYS BY FISCAL YEARS TO JUNE 30, 1948

Fiscal year	Total annual revenue ^a	Gasoline tax	Motor vehicle fees	Transportation tax	Federal Government reimbursements	Contributions
1911-1912	\$160,503 04					
1912-1913	1,255,693 94					
1913-1914	2,346,271 78					
1914-1915	6,719,658 93		\$4,655 17			
1915-1916	7,566,984 05		193,115 33			
1916-1917	2,676,472 92		1,053,883 03			
1917-1918	5,379,741 65		1,094,625 67			
1918-1919	7,601,610 83		525,282 27			\$190,109 68
1919-1920	8,491,726 26		1,741,701 97			77,000 00
1920-1921	9,132,386 08		1,624,299 77			265,008 30
1921-1922	18,267,769 70		3,013,192 36			79,988 27
1922-1923	16,454,482 53		3,783,054 95			20,014 48
1923-1924	15,331,219 89	\$2,766,943 03	4,873,394 71			257,584 66
1924-1925	24,140,339 40	6,354,611 72	3,073,658 86			55,693 85
1925-1926	14,778,797 79	8,450,276 46	3,432,610 98			128,352 00
1926-1927	28,678,423 23	15,702,018 67	3,721,414 55			612,738 63
1927-1928	31,500,983 35	20,236,509 58	3,775,453 23	\$483,684 00		495,935 09
1928-1929	32,500,985 88	22,433,045 39	3,910,310 59	767,224 09		375,733 09
1929-1930	32,186,234 92	23,934,563 01	4,193,435 39	521,894 08		170,663 91
1930-1931	34,502,696 49	26,934,001 86	3,387,536 94	523,097 27		582,702 94
1931-1932	33,271,262 63	23,850,223 12	3,334,031 49	389,850 85		297,505 18
1932-1933	37,866,497 26	23,755,131 50	2,963,647 39	7,205,767 53		418,785 58
1933-1934	39,908,589 73	24,324,472 98	2,551,433 53	350,368 05		369,022 47
1934-1935	44,932,706 70	28,576,526 35	2,722,099 12	278,351 38		173,425 77
1935-1936	45,000,245 99	31,174,513 72	2,917,918 31	111,654 34		180,484 51
1936-1937	44,338,155 41	33,305,122 43	3,393,254 69	15,696 24		283,995 95
1937-1938	48,841,753 86	34,619,437 09	3,793,791 96	90,099 88		469,154 37
1938-1939	50,993,637 06	39,074,865 15	4,067,087 36	90,099 88		486,915 31
1939-1940	58,417,281 04	47,674,280 92	7,751,399 98	16,571,766 51		116,801 77
1940-1941	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		782,634 60
1941-1942	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		887,600 88
1942-1943	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		480,909 47
1943-1944	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		287,202 34
1944-1945	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		287,202 34
1945-1946	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		1,462,901 21
1946-1947	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		867,935 21
1947-1948	64,885,373 90	52,585,738 24	7,513,999 98	15,696 24		654,882 26
Totals	\$1,131,548,216 47	\$666,654,434 84	\$114,895,723 08	\$8,907,187 56	\$208,390,257 63	\$13,711,499 66

^a Includes \$275,733.33 paid direct by State Controller to State Highway Engineer and Highway Commissioners.^b Does not include apportionment for quarter ending June 30, 1948, received in July—\$18,824,651.44.^c Does not include apportionment for quarter ending June 30, 1948, received in July—\$1,482,475.19.

DIVISION OF HIGHWAYS

113

Fiscal year	State General Fund appropriations ^a	1st 2d 3d Highway Funds	Advertising license fees	Use fuel tax (diesel)	Caravan fees	Miscellaneous
1911-1912	\$6,933 33	\$153,569 71				
1912-1913	20,800 00	1,234,893 94				
1913-1914	20,800 00	2,320,816 61				
1914-1915	20,800 00	6,503,743 80				
1915-1916	20,800 00	6,302,191 34				
1916-1917	35,561 60	1,469,285 65				
1917-1918	24,458 08	4,505,421 24				
1918-1919	267,688 68	5,512,231 91				
1919-1920	20,800 00	6,000,000 00				
1920-1921	20,800 00	5,122,000 00				
1921-1922	128,300 00	19,012,550 00				
1922-1923	370,800 00	6,016,200 00				
1923-1924	316,600 00	7,000,000 00				
1924-1925	1,065 86	3,181,500 00				
1925-1926	181,121 75					
1926-1927	10,000 00					
1927-1928	1,079,094 52	b-222,160 50				
1928-1929						
1929-1930						
1930-1931	e-207,925 44					
1931-1932	20,000 00					
1932-1933						
1933-1934						
1934-1935						
1935-1936						
1936-1937						
1937-1938						
1938-1939						
1939-1940						
1940-1941						
1941-1942						
1942-1943	13,520,000 00					
1943-1944						
1944-1945	12,000,000 00					
1945-1946						
1946-1947	e-487 40					
1947-1948						
Totals	\$27,878,009 98	\$74,112,243 50	\$480,739 27	e\$13,721,104 50	\$1,092,740 06	e\$1,704,276 39

^a Includes \$275,733 33 paid direct by State Controller to State Highway Engineer and Highway Commissioners.^b Represents discount on bonds.^c Represents reduction of revenue due to reversion of appropriations.^d Does not include appropriation for quarter ending June 30, 1948, received in July—\$728,032 42.^e Net earnings on investments—\$1,049,982 57; recoveries, U. S. war damage claims—\$651,293 82; franchise tax, toll ferries—\$3,000.

FEDERAL REIMBURSEMENTS
Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1948

Fiscal year	ON STATE SYSTEM								
	Total federal funds	Regular federal aid	Urban federal aid	Emergency and public works funds 1930-1935	Federal land projects	Emergency relief-floods 1938-1940	Strategic network	*Public works administration grants (PWA)	Advanced engineering
1917-1918	\$59,571 76	\$59,571 76							
1919-1920	526,612 01	526,612 01							
1920-1921	1,297,200 85	1,297,200 85							
1921-1922	1,925,603 19	1,925,603 19							
1922-1923	2,969,295 33	2,969,295 33							
1923-1924	2,683,093 33	2,683,093 33							
1924-1925	3,371,711 00	3,371,711 00							
1925-1926	3,287,067 83	3,287,067 83							
1926-1927	2,978,864 97	2,978,864 97							
1927-1928	2,434,125 74	2,434,125 74							
1928-1929	3,443,873 70	3,443,873 70							
1929-1930	3,931,822 91	3,931,822 91							
1930-1931	4,493,802 63	4,493,802 63							
1931-1932	7,205,767 53	4,196,940 18		\$3,008,827 35					
1932-1933	7,108,490 62	3,744,429 15		3,364,061 47					
1933-1934	6,298,332 70	3,654,740 26		5,643,592 53					
1934-1935	10,041,240 32	32,971 95		9,792,386 75	\$215,890 62				
1935-1936	9,550,349 23	633,045 90		7,517,308 18	79,493 05				
1936-1937	16,571,766 51	4,911,042 70		1,294,076 85	204,262 50				
1937-1938	8,873,600 09	8,873,600 09		556,905 34	131,892 00				
1938-1939	9,269,747 08	4,570,223 49		14,264 76	63,097 00				
1939-1940	6,152,641 50	3,214,413 47		24,252 12	164,324 00	\$867,830 00		\$757,270 00	
1940-1941	7,877,834 54	5,512,786 00			179,889 66	598,791 74		75,718 41	
1941-1942	5,635,224 61	3,896,659 66			29,922 66	316,189 64		178,514 75	
1942-1943	15,346,517 40	3,258,650 78			15,154 07	159,392 86			
1943-1944	10,864,032 89	1,575,511 24				17,285 76	\$246,602 00		
1944-1945	4,693,397 39	464,102 88					643,034 58		
1945-1946	4,574,012 34	529,544 49					95,742 64		
1946-1947	19,069,697 28	8,151,245 04					424,856 00		\$86,366 00
1947-1948	25,855,041 17	9,791,511 38	\$3,754,386 02 8,148,358 78		38,492 00		884,473 95		107,102 00
Totals	\$208,390,257 63	\$93,895,181 87	\$11,902,744 80	\$31,215,575 35	\$1,122,417 56	\$1,959,490 00	\$2,298,561 00	\$1,011,503 16	\$230,201 00

* Includes PWA grants in the amount of \$164,572.52 accounted as "Contributions" in ledger accounts.

FEDERAL REIMBURSEMENTS—Continued
Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1948

Fiscal year	ON AND OFF STATE SYSTEM					Nonhighway work flight strips
	Works program fund		Federal aid secondary		Access highways	
	Highways	Grade crossings	Highways	Grade crossings		
1917-1918						
1919-1920						
1920-1921						
1921-1922						
1922-1923						
1923-1924						
1924-1925						
1925-1926						
1926-1927						
1927-1928						
1928-1929						
1929-1930						
1930-1931						
1931-1932						
1932-1933						
1933-1934						
1934-1935						
1935-1936						
1936-1937						
1937-1938						
1938-1939						
1939-1940						
1940-1941						
1941-1942						
1942-1943						
1943-1944						
1944-1945						
1945-1946						
1946-1947						
1947-1948						
Totals	\$7,747,928 00	\$7,486,362 00	\$9,620,323 96	\$5,659,022 33	\$31,995,621 15	\$2,245,325 45

EXPENDITURES BY DIVISION OF HIGHWAYS TO JUNE 30, 1948

Classified as to Function

Item	Totals to June 30, 1948		July 1, 1947-June 30, 1948		July 1, 1946-June 30, 1947		July 1, 1945-June 30, 1946	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Preliminary engineering.....	\$31,325,219 75	2.87	\$3,563,337 31	2.86	\$2,854,510 81	3.14	\$2,099,262 94	4.58
Construction engineering—day labor.....	102,499 14	.08	102,499 14	.08	101,328 37	.11	66,455 45	.14
Construction engineering—contracts.....	5,150,730 54	4.14	5,150,730 54	4.14	3,876,767 52	4.27	1,345,613 44	2.94
Construction engineering—total.....	40,963,433 51	3.75	14,998,513 06	12.05	8,744,908 70	9.63	6,735,981 40	14.70
Right of way.....	79,475,622 97	7.29	3,668,755 15	2.95	3,210,173 49	3.54	2,069,029 07	4.51
Construction and improvement work—day labor.....	103,831,393 57	9.50	55,071,632 22	44.24	40,000,963 87	44.06	10,304,857 97	22.48
Construction and improvement work—contracts.....	442,862,270 84	40.45	5,209,982 80	.48	147,723 68	.16	173,374 46	.38
Betterments—day labor.....	8,037,200 02	.74	1,072,085 48	.10	2,082,674 61	2.30	825,319 60	1.80
Betterments—contracts.....	5,209,982 80	.48	73,030 10	.06	150,000 00	.17	2,343,053 76	5.11
Bridge reconstruction—day labor.....	1,072,085 48	.10	5,252,017 16	.49	3,920,505 15	4.32		
Bridge reconstruction—contracts.....	5,252,017 16	.49	73,030 10	.06				
Joint highway districts.....	3,429,483 92	3.32	5,574,013 72	4.48				
Cities $\frac{1}{4}$ cent State highways—construction.....	38,186,246 12	3.51						
Totals, construction, improvements and betterments.....	\$759,644,956 14	69.50	\$88,202,511 24	70.86	\$55,089,556 20	71.70	\$25,962,948 09	56.64
Aid to counties.....	\$25,000 00							
Flight strip construction.....	2,245,325 45	.21	\$—64 24		\$—1,210 22		\$17,275 49	.04
County postwar projects.....	1,499,512 60	.14			39,354 39	.04	134,438 02	.30
Work for other agencies.....	1,017,696 86	.09	310,000 55	.25				
Maintenance.....	203,597,341 18	18.63	15,617,718 55	12.55	11,877,566 30	13.09	11,335,460 96	24.73
Cities $\frac{1}{4}$ cent State highways—maintenance.....	9,653,522 29	.88	711,582 15	.57	889,304 95	.98	811,681 91	1.77
City streets (Section 194—S & H Code).....	51,961,787 56	4.76	8,102,917 03	6.51	6,167,500 59	6.79	3,531,600 44	7.70
Damage claims paid.....	63,965 67		10,722 58	.01			773 23	
Highway planning.....	1,926,791 76	.18	431,154 60	.35	237,089 38	.26	204,164 22	.45
Planning survey.....	2,184,217 81	.20	366,644 30	.29	339,693 64	.37	132,829 33	.29
Supervision of outdoor advertising.....	472,026 80	.04	55,593 72	.04	41,677 70	.05	34,106 88	.07
Plants and equip ment.....	14,104,618 97	1.29	6,166,393 96	4.96	2,546,797 00	2.81	510,463 68	1.11
Reserves and s pense.....	4,181,151 02	.38	578,605 69	.46	581,476 63	.64	769,213 97	1.68
Totals, m intenance, special activities, miscellaneous.....	\$292,932,957 97	26.80	\$32,351,276 79	25.99	\$22,719,340 36	25.03	\$17,482,008 73	38.14
Administration expense—								
At district offices.....	\$19,387,132 21	1.77	\$2,055,005 99	1.65	\$1,420,220 33	1.57	\$1,161,086 02	2.53
At headquarters office.....	15,459,843 43	1.41	1,312,744 43	1.05	1,032,070 95	1.17	911,862 95	1.99
Division of Contracts and Rights of Way.....	574,457 86	.05	125,613 07	.10	63,896 24	.10	80,334 54	.18
Department of Public Works.....	1,056,549 27	.10	85,987 11	.07	68,541 91	.07	67,687 82	.15
Other State depart ments.....	3,693,439 57	.34	346,266 90	.28	324,244 48	.36	167,864 39	.37
Paid direct by State Controller.....	275,733 33	.03						
Federal—non-highway.....	7,744 73		17 10		300 34		1,648 75	
Total administration.....	\$40,454,930 40	3.70	\$3,925,634 60	3.15	\$2,969,274 25	3.27	\$2,390,484 47	5.22
Grand totals.....	\$1,093,032,844 51	100.00	\$124,479,422 63	100.00	\$90,778,170 81	100.00	\$45,835,441 29	100.00

EXPENDITURES BY DIVISION OF HIGHWAYS TO JUNE 30, 1948—Continued

DIVISION OF HIGHWAYS

117

Classified as to Function

Item	July 1, 1944-June 30, 1945		July 1, 1943-June 30, 1944		March 1, 1912-June 30, 1943	
	Amount	Percent	Amount	Percent	Amount	Percent
Preliminary engineering-----	\$1,780,828 24	5.21	\$1,471,888 68	3.71	\$19,555,411 77	2.58
Construction engineering—day labor-----	46,402 60	.14	72,118 87	.18		
Construction engineering—contracts-----	658,638 72	1.92	1,092,247 91	2.76		
Construction engineering—total-----					28,450,540 95	3.75
Right of way-----	6,514,767 50	19.06	4,614,389 64	11.64	37,867,063 67	4.99
Construction and improvement work—day labor-----	1,504,143 68	4.40	2,556,470 41	6.45	90,822,821 77	11.98
Construction and improvement work—contracts-----	6,410,299 28	18.77	13,156,271 79	33.20	317,912,345 71	41.93
Betterments—day labor-----					8,037,200 02	1.06
Betterments—contracts-----					5,209,982 80	.69
Bridge rec const—day labor-----	244,456 74	.71	205,396 95	.52	301,133 65	.04
Bridge reconstruction—contracts-----	481,899 94	1.41	413,407 67	1.04	1,448,715 34	.19
Joint highway districts-----	26,607 00	.08	21,222 31	.05	3,158,564 51	.42
Cities 1/4 cent State highways—construction-----	970,283 06	2.84	1,199,537 41	3.03	24,178,853 02	3.19
Totals, construction, improvements and betterments-----	\$18,644,476 76	54.54	\$24,802,631 64	62.58	\$536,942,532 21	70.82
Aid to counties-----	\$31,995 08	.09	\$497,033 84	1.25	\$25,000 00	.22
Flight strip construction-----	713,638 93	2.09	612,080 66	1.54	1,709,295 50	
County postwar projects-----					707,690 31	.09
Work for other agencies-----					146,268,869 29	19.30
Maintenance-----	9,547,486 42	27.93	8,950,239 66	22.59	5,874,793 64	.78
Cities 1/4 cent state highways—maintenance-----	695,483 65	2.04	670,675 99	1.69	28,970,059 77	3.83
City streets (Section 194—S & H Code)-----	2,449,076 87	7.16	2,740,541 96	6.92	52,469 86	.01
Damage claims paid-----					761,473 24	.10
Highway planning-----	172,641 34	.50	120,269 98	.30	1,170,899 21	.15
Planning survey-----	88,703 28	.26	85,448 05	.22	283,648 76	.04
Supervision of outdoor advertising-----	29,669 50	.09	28,330 24	.08	5,722,221 04	.75
Plants and equipment-----	—218,378 17	— .65	—622,878 54	—1.57	2,153,044 41	.28
Reserves and suspense-----	270,643 37	.80	—171,834 05	— .44		
Totals, maintenance, special activities, miscellaneous-----	\$13,780,960 27	40.31	\$12,909,907 79	32.58	\$193,689,464 03	25.55
Administration expense—						
At district offices-----	\$933,083 36	2.73	\$867,184 09	2.19	\$12,950,552 42	1.71
At headquarters office-----	695,080 88	2.03	680,297 52	1.72	10,797,786 70	1.42
Division of Contracts and Rights of Way-----	69,141 23	.21	71,266 10	.18	134,236 68	.02
Department of Public Works-----	65,910 42	.19	52,625 59	.13	715,796 42	.09
Other State departments-----	—9,811 04	— .03	244,804 69	.62	2,650,070 15	.35
Paid direct by State Controller-----					275,733 33	.04
Federal—non-highway-----	5,778 54	.02				
Total administration-----	\$1,759,183 39	5.15	\$1,916,177 99	4.84	\$27,494,175 70	3.63
Grand totals-----	\$34,184,620 42	100.00	\$39,629,017 42	100.00	\$758,126,171 94	100.00

EXPENDITURES BY DIVISION OF HIGHWAYS BY FISCAL YEARS TO JUNE 30, 1948
Classified as to Location and Purpose

Fiscal year	Total annual expenditures	EXPENDITURES ON HIGHWAYS						Maintenance
		Construction—Reconstruction—Improvements (Includes right of way and engineering)				On State system		
		On State system		Off State system		On State system		
		Rural	Incorporated cities ^a	Rural	Incorporated cities	Rural	Incorporated cities ^a	
1912-1922.....	\$68,361,014 24	\$58,325,400 50					\$6,054,750 20	
1922-1923.....	18,181,744 42	14,624,956 92					2,077,224 82	
1923-1924.....	16,475,994 29	12,034,358 88					2,639,929 64	
1924-1925.....	15,813,595 38	11,942,581 96					3,177,066 68	
1925-1926.....	16,064,960 01	11,568,911 25					3,426,747 56	
1926-1927.....	15,983,286 87	10,353,680 23					5,656,244 73	
1927-1928.....	15,886,156 89	10,075,388 80					4,462,993 83	
1928-1929.....	25,475,504 47	19,353,930 87					4,926,454 10	
1929-1930.....	33,144,154 41	25,192,676 42					6,752,845 54	
1930-1931.....	32,301,209 22	25,289,622 75					5,678,964 43	
1931-1932.....	35,162,149 64	26,465,989 16					6,843,801 35	
1932-1933.....	32,892,832 02	25,723,627 17		\$4,406,115 40			5,798,548 59	
1933-1934.....	37,309,010 00	23,634,467 29		7,473,071 99			6,933,895 17	\$151,403 38
1934-1935.....	36,950,873 25	19,559,413 58		8,114,562 63	\$1,340,924 75		8,106,234 39	390,096 65
1935-1936.....	39,095,463 64	17,220,992 91		7,856,292 69	1,117,987 66		8,242,656 83	344,152 88
1936-1937.....	53,022,109 28	28,241,432 35		5,668,787 73	480,283 56		585,831 87	815,607 77
1937-1938.....	45,518,395 91	20,951,839 87		6,134,917 22	951,170 21		10,660,911 63	790,433 54
1938-1939.....	41,559,637 90	18,879,954 23		8,659,388 88	280,213 25		9,264,715 07	806,731 11
1939-1940.....	40,884,541 39	14,866,211 88		6,827,184 43	392,268 37		10,411,642 26	868,571 11
1940-1941.....	44,484,630 14	18,403,813 63		8,064,636 76	388,231 99		10,829,230 19	770,802 67
1941-1942.....	47,036,117 74	17,686,161 65		819,089 41	488,372 28		7,969,320 59	630,487 03
1942-1943.....	45,621,190 83	14,814,712 06		5,985,291 10	2,440,393 67		8,942,213 48	678,702 17
1943-1944.....	39,629,017 42	13,623,886 72		6,434,973 41	2,699,216 90		8,942,213 48	725,291 70
1944-1945.....	34,184,620 42	9,602,452 14		6,719,379 61	1,015,462 95		9,517,678 37	831,270 44
1945-1946.....	45,835,441 29	17,436,547 94		7,306,222 38	3,665,529 44		11,315,872 43	925,732 69
1946-1947.....	90,778,170 81	38,198,936 40		21,235,659 32	3,004,182 82		11,841,138 56	925,732 69
1947-1948.....	124,479,422 63	43,486,410 94		33,898,980 94	9,110,028 78		14,666,448 44	1,662,852 26
Totals.....	\$1,093,032,844 51	\$567,558,658 50	\$146,060,358 48		\$27,526,309 60	\$13,124,740 61	\$202,272,836 14	\$10,978,027 33

^a Includes Cities 1¢ State Highway Funds.

EXPENDITURES BY DIVISION OF HIGHWAYS BY FISCAL YEARS TO JUNE 30, 1948—Continued
Classified as to Location and Purpose

Fiscal year	EXPENDITURES ON HIGHWAYS		Administration special investigations and highway planning survey	Equipment, plants, reserves, suspense and miscellaneous	Supervision of outdoor advertising	Flight strip construction
	Subventions to counties ^b	Subventions to cities ^c				
1912-1922						
1922-1923	\$50,000 00		\$1,280,938 17	\$2,699,925 37		
1923-1924			790,685 95	635,876 73		
1924-1925			765,139 85	1,036,565 92		
1925-1926			747,845 54	154,600 39		
1926-1927	50,000 00		707,189 22	312,111 98		
1927-1928	50,000 00		819,675 49	896,313 58		
1928-1929	75,000 00		850,542 37	422,231 89		
1929-1930	80,000 00		997,208 42	115,911 08		
1930-1931	336,280 00		1,066,796 62	204,444 17		
1931-1932	411,449 86		1,050,133 14	126,260 96		
1932-1933	339,223 20		1,086,879 08	426,256 85		
1933-1934	62,560 10		1,100,206 71	207,889 45		
1934-1935	663,574 94		1,196,685 82	305,575 75	\$17,892 25	
1935-1936	16,840 85		1,432,696 29	233,108 91	27,976 24	
1936-1937	158,722 14	\$1,902,631 42	1,308,224 36	983,360 91	19,915 86	
1937-1938	100,000 00	3,587,123 05	1,935,760 95	119,403 55	29,394 80	
1938-1939	201,338 64	4,000,269 75	1,865,727 42	755,014 05	32,375 40	
1939-1940	25,765 86	4,081,769 62	1,809,589 34	465,054 96	33,552 63	
1940-1941	43,000 00	4,225,718 94	1,873,339 46	442,411 28	30,543 09	
1941-1942	145,583 00	4,445,932 35	2,225,063 14	398,946 05	30,733 41	
1942-1943	127,589 00	4,609,321 49	2,302,842 51	1,266,684 91	33,409 44	\$37,969 43
1943-1944	142,935 33	3,287,591 87	2,131,377 30	812,284 92	26,855 64	1,662,326 07
1944-1945	633,302 97	2,790,587 92	2,121,896 02	794,712 59	28,330 24	497,033 84
1945-1946	740,305 93	2,518,438 75	2,020,528 01	52,265 20	29,669 50	31,995 08
1946-1947	134,438 62	3,615,319 61	2,727,478 02	1,280,450 88	34,100 88	17,275 49
1947-1948	189,354 39	6,444,492 83	3,546,057 27	3,128,273 63	41,677 70	-1,210 22
	73,030 10	8,397,994 94	4,723,433 50	7,065,729 78	55,593 72	-64 24
Totals	\$4,953,996 52	\$53,907,192 59	\$44,565,939 97	\$19,367,432 52	\$472,026 80	\$2,245,325 45

^b Includes Joint Highway Districts, County Postwar Projects and Aid to Counties.

^c Includes Cities—City Street Funds and Cities $\frac{1}{2}$ State Highway Funds.

STATEMENT OF EXPENDITURES IN COUNTIES FOR CONSTRUCTION, RECONSTRUCTION, IMPROVEMENTS, AND MAINTENANCE AND CONTRIBUTIONS RECEIVED IN CONNECTION THEREWITH, JANUARY 1, 1912, TO JUNE 30, 1948

(Expenditures Shown Include Expenditures of Contributions Received From Counties and Others and Expenditures in Joint Highway Districts But Exclude City Gasoline Tax Expenditures)

County	CONSTRUCTION, RECONSTRUCTION, IMPROVEMENTS				MAINTENANCE EXPENDITURES	
	Expenditures		Contributions			
	47-48 fiscal year July 1, 1947 June 30, 1948	Totals January 1, 1912 June 30, 1948	47-48 fiscal year July 1, 1947 June 30, 1948	Totals January 1, 1912 June 30, 1948	47-48 fiscal year July 1, 1947 June 30, 1948	Totals January 1, 1912 June 30, 1948
Alameda	\$5,987,012 20	\$29,172,867 01	\$-12,146 62	\$180,499 01	\$275,775 56	\$2,539,820 98
Alpine	492 52	745,487 08			54,354 53	1,124,806 88
Amador	634,773 56	2,836,464 61	58 72	4,880 95	175,673 24	2,241,034 88
Butte	130,621 26	7,113,951 72	7,086 60	73,427 36	491,773 60	2,795,591 85
Calaveras	161,583 32	2,826,110 23		102,361 10	157,867 55	2,024,584 49
Colusa	182,429 37	3,882,691 54	3,017 56	70,101 07	90,775 70	1,419,054 97
Contra Costa	1,403,337 96	11,701,775 82		43,446 70	250,485 73	2,377,779 56
Del Norte	34,404 45	7,909,494 64	2,100 00	30,050 00	242,416 47	3,385,957 04
El Dorado	263,465 65	4,362,976 74	2,799 93	8,599 70	248,907 01	3,334,331 16
Fresno	3,050,476 74	14,131,528 94	1,500 00	82,427 79	312,710 26	3,359,394 18
Glenn	529,118 76	3,311,711 16	22,899 42	119,571 60	17,376 10	1,211,367 10
Humboldt	942,670 76	17,971,678 51	22,375 00	335,462 74	605,753 62	8,808,238 45
Imperial	2,128,664 18	16,395,812 83	1,374 63	124,304 19	254,133 27	3,812,093 27
Inyo	713,366 82	5,211,588 41		4,500 00	219,146 59	3,084,957 24
Kern	3,059,099 49	27,385,609 14		175,707 34	604,946 06	8,042,133 86
Kings	225,918 96	2,449,441 25	354 75	31,836 00	119,585 95	1,286,585 34
Lake	559,841 30	3,941,595 04	500 00	6,897 14	149,106 01	2,190,469 81
Lassen	617,528 20	6,100,940 16	750 00	211,407 77	199,072 19	2,664,341 84
Los Angeles	18,274,442 36	105,809,220 39	24,310 71	693,535 06	1,112,118 74	12,143,821 48
Madera	720,225 95	4,863,431 48		90,292 95	97,457 51	1,115,290 83
Marin	838,234 47	11,995,238 81	4,949,399 60	179,526 54	213,507 33	2,710,496 86
Mariposa	83,340 23	4,893,220 43	552 61	125,008 10	69,297 76	1,621,546 18
Mendocino	2,361,210 17	17,758,254 29	3,600 00	89,519 07	465,693 29	7,307,007 88
Merced	424,772 23	8,226,496 02		72,484 13	146,983 46	2,381,284 79
Modoc	609,420 43	4,420,022 97		147,298 60	222,681 84	2,179,354 70
Mono	193,704 27	5,104,711 83			326,769 49	4,102,780 63
Monterey	517,209 89	23,829,983 26	4,132 67	148,152 19	367,127 10	4,767,096 12
Napa	108,022 19	3,281,662 65	5,151 34	117,716 66	128,027 61	1,723,121 98
Nevada	266,345 15	6,129,896 95		107,805 82	277,935 28	3,532,079 12
Orange	1,370,699 43	16,223,800 05		270,599 09	325,457 96	3,673,322 15
Placer	1,000,779 64	10,506,985 58	653 79	81,008 57	238,285 41	3,658,744 89
Plumas	382,190 58	6,928,990 34	53,618 37	93,655 15	217,516 20	3,050,680 87
Riverside	1,085,842 62	17,625,901 07		198,957 51	501,100 68	6,273,148 24
Sacramento	1,530,650 63	11,481,628 75	49,081 47	451,419 53	304,343 93	3,994,345 00
San Benito	519,527 99	3,331,973 92		70,909 52	69,240 66	1,080,259 83
San Bernardino	3,614,755 41	28,359,254 26	96,776 33	281,362 29	901,798 99	13,143,642 25
San Diego	3,333,805 71	37,878,819 35	13,957 74	1,173,796 81	464,440 44	5,812,633 67
San Francisco	2,243,984 55	13,289,409 96		142,899 12	58,860 19	1,292,327 29
San Joaquin	1,348,886 08	15,455,768 49	3,968 28	90,094 40	291,474 51	3,518,185 59
San Luis Obispo	2,252,462 08	13,744,076 37	1,000 00	81,261 82	326,727 29	4,233,548 39
San Mateo	4,467,158 27	24,948,299 54	31,666 66	2,732,383 79	256,281 09	3,695,814 11
Santa Barbara	2,510,626 41	21,247,526 64	9,292 70	191,180 54	301,212 14	4,236,483 56
Santa Clara	612,174 35	16,998,835 40	23,701 72	207,678 81	335,943 87	3,824,005 20
Santa Cruz	1,508,597 46	7,628,742 00	1,500 00	603,968 01	167,148 72	2,737,696 12
Shasta	1,588,864 41	18,658,903 75	455 09	1,913,915 15	350,798 27	5,449,429 01
Sierra	2,984 14	1,130,756 64		19,440 68	98,199 29	1,074,334 34
Siskiyou	1,259,354 13	10,650,886 70	356 50	126,719 48	324,129 15	4,779,824 57
Solano	1,131,346 27	14,117,995 34	1,380 97	67,321 89	389,248 24	3,365,270 65
Sonoma	258,805 17	8,689,658 57	950 00	155,329 36	389,248 24	4,155,423 94
Stanislaus	455,811 25	5,021,168 88		22,279 68	164,058 53	1,304,404 37
Sutter	209,408 30	2,909,723 14	17,941 08	49,495 14	51,324 00	621,246 83
Tehama	495,509 14	7,656,066 68	35 32	45,218 90	267,010 81	3,272,772 93
Trinity	537,647 53	6,543,630 93		7,680 00	170,928 47	2,322,173 02
Tulare	1,603,695 45	8,651,810 68	7,150 00	57,435 75	308,105 56	3,382,039 81
Tuolumne	117,594 21	2,205,370 51	500 00	13,397 18	201,700 86	3,005,517 92
Yentura	1,140,222 04	16,773,635 32	16,500 00	16,500 00	369,084 28	5,101,742 83
Yuba	371,360 29	7,514,182 62		44,047 22	196,275 56	2,607,100 13
Yuba	631,521 14	4,306,382 24	25,463 32	65,287 55	43,075 96	867,241 20
Totals	\$82,590,997 52	\$721,244,047 13	\$-4,495,561 02	\$12,647,122 02	\$15,617,718 55	\$203,597,341 18

STATE HIGHWAY OPERATING BUDGET—1947-1948 FISCAL YEAR

Statement of Budgetary Transactions as of June 30, 1948 *

	Transfers		Budgetary adjustments	Contributions	Adjusted budget	Expenditures and contract obligations	Unexpended balances
	From 1946-1947 fiscal year operating budget	From 1947-1948 fiscal year budget					
Preliminary engineering:							
North	\$187,200 01	\$1,500,000 00	—\$27,212 97	—\$70,722 12	\$1,580,264 02	\$1,580,501 82	a—\$236 90
South	219,966 75	2,000,000 00	—403,280 17	354 79	1,816,331 79	1,817,600 91	a—1,289 12
Totals	\$407,166 76	\$3,500,000 00	—\$430,493 14	—\$80,076 91	\$3,396,596 71	\$3,398,102 73	—\$1,506 02
Right of way:							
North	\$1,025,187 74	\$6,000,000 00	—\$513,288 50	—\$112,272 86	\$6,399,626 38	\$6,399,626 38	
South	1,632,388 96	7,500,000 00	—673,950 75	1,983 04	8,660,421 25	8,660,421 25	
Totals	\$2,657,576 70	\$13,500,000 00	—\$1,187,239 25	—\$110,289 82	\$15,080,047 63	\$15,060,047 63	
Construction engineering:							
North	\$471,340 34	\$2,100,000 00	—\$331,526 48	—\$9,853 09	\$2,229,960 77	\$2,239,034 13	a—\$9,073 36
South	771,455 70	2,100,000 00	—640,718 01		2,230,737 69	2,244,052 41	a—13,314 72
Totals	\$1,242,796 04	\$4,200,000 00	—\$972,244 49	—\$9,853 09	\$4,460,698 46	\$4,483,086 54	—\$22,388 08
Construction projects:							
North	\$26,612,215 11	\$16,714,000 00	\$780,817 87	—\$4,666,621 55	\$39,449,411 43	\$39,770,587 47	a—\$321,176 04
South	21,207,588 16	17,546,600 00	3,648,467 69	132,146 40	42,534,802 25	43,074,451 59	a—539,649 34
Totals	\$47,819,803 27	\$34,260,600 00	\$4,438,285 56	—\$4,534,475 15	\$81,984,213 68	\$82,845,039 06	—\$860,825 38
Cities $\frac{1}{2}$ cent—State highways:							
North	\$5,718,086 55	\$1,294,358 04			\$7,012,445 49	\$2,056,311 82	b—\$4,956,133 67
South	7,707,483 86	1,902,341 89			9,609,825 75	4,685,739 29	b ₄ —\$4,924,086 46
Totals	\$13,425,570 41	\$3,196,700 93			\$16,622,271 24	\$6,742,051 11	\$9,880,220 13
Joint highway districts:							
North	\$169,898 86	\$142,000 00	—\$274,476 86		\$37,422 00	\$74,844 00	a—\$37,422 00
Contingency reserves:							
North	\$300,070 16	\$3,886,355 69	\$356,686 94		\$4,543,121 79		c—\$4,543,121 79
South	2,151,143 89	4,851,937 45	—1,930,518 76		5,072,561 58		c ₃ —\$5,072,561 58
Totals	\$2,451,222 05	\$8,738,293 14	—\$1,573,831 82		\$9,615,683 37		\$9,615,683 37

COUNTY HIGHWAY BUDGET
STATEMENT OF BUDGETARY TRANSACTIONS
As of June 30, 1948

County	Apportionments	Contributions	Total budget	Expenditures authorized work orders	Unencumbered balance available
Alameda-----	\$321,777 00	\$661 16	\$322,438 16	\$147,816 04	\$174,622 12
Alpine-----	127,446 00	-----	127,446 00	-----	127,446 00
Amador-----	127,446 00	1,741 28	129,187 28	237,016 97	107,829 69
Butte-----	420,150 00	8,786 60	428,936 60	120,799 60	308,137 00
Calaveras-----	153,782 00	1,500 00	155,282 00	191,779 00	36,497 00
Colusa-----	174,538 00	9,017 56	183,555 56	246,844 96	63,289 40
Contra Costa-----	371,242 00	2,300 00	373,542 00	250,734 00	122,808 00
Del Norte-----	127,446 00	3,050 00	130,496 00	91,050 00	39,446 00
El Dorado-----	220,629 00	2,273 50	222,902 50	86,393 00	136,509 50
Fresno-----	1,304,780 00	3,350 00	1,308,130 00	786,629 36	521,500 64
Glenn-----	207,446 00	25,274 42	232,720 42	348,013 56	115,293 14
Humboldt-----	473,566 00	5,974 96	479,540 96	347,104 92	132,436 04
Imperial-----	536,729 00	537 13	537,266 13	5,202 09	532,064 04
Inyo-----	631,729 00	2,000 00	633,729 00	465,546 46	168,182 54
Kern-----	1,142,313 00	4,162 50	1,146,475 50	570,092 38	576,383 12
Kings-----	305,535 00	1,354 75	306,889 75	251,855 19	55,034 56
Lake-----	170,905 00	1,897 14	172,802 14	171,497 14	1,305 00
Lassen-----	379,042 00	7,095 17	386,137 17	270,095 17	116,042 00
Los Angeles-----	2,610,683 00	-----	2,610,683 00	1,086,522 30	1,524,160 70
Madera-----	310,021 00	20,150 00	330,171 00	257,171 28	72,999 72
Marin-----	232,079 00	1,900 00	233,979 00	224,900 00	9,079 00
Mariposa-----	161,722 00	552 61	162,274 61	99,539 86	62,734 75
Mendocino-----	404,430 00	6,500 00	410,930 00	245,217 75	165,712 25
Merced-----	437,164 00	-----	437,164 00	5,450 00	431,714 00
Modoc-----	323,749 00	35,562 97	359,311 97	459,745 74	100,433 77
Mono-----	227,618 00	-----	227,618 00	188,914 97	38,703 03
Monterey-----	513,305 00	6,132 67	519,437 67	209,852 67	309,585 00
Napa-----	221,482 00	11,750 59	233,232 59	122,900 59	110,332 00
Nevada-----	159,645 00	-----	159,645 00	-----	159,645 00
Orange-----	488,730 00	-----	488,730 00	286,920 00	201,810 00
Placer-----	262,339 00	2,013 79	264,352 79	170,613 79	93,739 00
Plumas-----	253,393 00	71,325 46	324,718 46	487,972 00	163,253 54
Riverside-----	937,060 00	1,000 00	938,060 00	296,763 89	641,296 11
Sacramento-----	569,976 00	1,931 47	571,907 47	398,996 32	172,911 15
San Benito-----	182,901 00	-----	182,901 00	136,987 14	45,913 86
San Bernardino-----	1,708,114 00	2,350 00	1,710,464 00	945,211 06	765,252 94
San Diego-----	741,124 00	1,500 00	742,624 00	12,100 00	730,524 00
San Joaquin-----	597,435 00	3,968 28	601,403 28	189,696 96	411,706 32
San Luis Obispo-----	401,382 00	1,300 00	402,682 00	217,897 18	184,784 82
San Mateo-----	230,138 00	113,043 56	343,181 56	489,246 47	146,064 91
Santa Barbara-----	344,544 00	-----	344,544 00	296,445 82	48,098 18
Santa Clara-----	585,507 00	10,202 30	595,709 30	544,139 86	51,569 44
Santa Cruz-----	207,674 00	3,300 00	210,974 00	75,226 36	135,747 64
Shasta-----	415,501 00	4,630 77	420,131 77	463,285 16	43,153 39
Sierra-----	127,446 00	800 00	128,246 00	2,358 64	125,887 36
Siskiyou-----	599,980 00	16,799 83	616,779 83	734,967 49	118,187 66
Solano-----	252,563 00	2,100 00	254,663 00	99,000 00	155,663 00
Sonoma-----	594,698 00	2,150 00	596,848 00	507,977 87	88,870 13
Stanislaus-----	513,457 00	-----	513,457 00	372,002 66	141,454 34
Sutter-----	185,165 00	-----	185,165 00	800 00	184,365 00
Tehama-----	298,520 00	764 68	299,284 68	204,976 29	94,308 39
Trinity-----	268,597 00	8,680 00	277,277 00	270,280 00	6,997 00
Tulare-----	928,002 00	8,990 00	936,992 00	1,165,133 19	228,141 19
Tuolumne-----	221,364 00	500 00	221,864 00	85,500 00	136,364 00
Ventura-----	401,086 00	-----	401,086 00	260,624 08	140,461 92
Yolo-----	225,072 00	2,000 00	227,072 00	265,076 52	38,004 52
Yuba-----	149,112 00	1,722 24	150,834 24	103,782 09	47,052 15
County apportionments	\$25,489,279 00	\$424,597 39	\$25,913,876 39	\$16,572,665 84	\$9,341,210 55
Grade crossing protection	265,000 00	-----	265,000 00	95,716 00	169,284 00
Grade crossing projects	230,000 00	-----	230,000 00	181,563 01	48,436 99
Grade crossing reserve	32,450 00	-----	32,450 00	-----	32,450 00
Totals-----	\$26,016,729 00	\$424,597 39	\$26,441,326 39	\$16,849,944 85	\$9,591,381 54

Unencumbered balance available includes uncollected Federal Aid amounting to \$9,239,227.

Overdrafts represent amounts assigned to Division of Highways from funds apportioned under Chapter 20, Statutes of 1946, which have not been collected, and amounts due from counties.

APPENDIX B
APPORTIONMENT OF MOTOR VEHICLE FEES
AND FUEL TAXES

- (a) Yearly Registration of Motor Vehicles in California.
- (b) County Apportionment of Funds Derived from Motor Vehicle Fees and Fuel Taxes, January 1, 1914 to June 30, 1948.
- (c) Apportionment of Funds Derived from Motor Vehicle Fees and Fuel Taxes, October 1, 1923 to June 30, 1948.

STATEMENT OF REGISTRATION OF MOTOR VEHICLES IN THE STATE OF CALIFORNIA FROM RECORDS OF THE DEPARTMENT OF MOTOR VEHICLES

	Fee paid registrations			Exempt Registrations	Total Registrations	Yearly increase	Percent increase over previous year
	Autos and Trucks	Trailers	Motor-cycles				
3/22/05-6/30/06	6,428				6,428		
7/1/06-6/30/08	17,015*				17,015	10,587	164.70
7/1/08-6/30/10	36,146				36,146	19,131	112.44
7/1/10-6/30/12	76,669				76,669	40,523	112.11
7/1/12-12/31/13	122,444				122,444	45,775	59.70
1914	123,516		24,709		148,225	25,781	21.06
1915	164,795		26,401		191,196	42,971	28.39
1916	232,440		30,994		263,434	72,238	37.78
1917	306,916		30,417		337,333	73,899	28.05
1918	364,800	674	25,973		391,447	54,114	16.04
1919	477,450	1,658	26,072		505,180	113,733	29.06
1920	571,979	2,644	20,564	9,000	604,187	99,007	19.60
1921	680,614	3,421	17,729	11,721	713,485	109,298	18.09
1922	861,807	4,861	16,301	14,163	897,132	183,647	25.74
1923	1,100,283	5,808	14,694	16,660	1,137,445	240,313	26.79
1924	1,319,072	19,033	12,324	17,776	1,368,205	230,760	20.29
1925	1,439,402	25,453	10,997	22,280	1,498,132	129,927	9.50
1926	1,599,246	30,759	10,289	24,027	1,664,321	166,189	11.09
1927	1,693,195	34,126	9,444	26,108	1,762,873	98,552	5.92
1928	1,799,890	37,073	9,449	30,520	1,876,932	114,059	6.47
1929	1,974,341	42,899	9,628	35,275	2,062,143	185,211	9.87
1930	2,041,356	48,532	9,405	37,337	2,136,630	74,487	3.61
1931	2,043,281	55,024	8,970	38,199	2,145,474	8,844	0.41
1932	1,971,616	61,870	8,338	38,433	2,080,257	-65,217	-3.04
1933	1,958,797	69,987	8,134	38,507	2,075,425	-4,832	-0.23
1934	1,993,116	79,474	8,294	39,569	2,120,453	45,028	2.17
1935	2,150,740	95,227	8,861	25,657	2,280,485	160,032	7.55
1936	2,327,029	112,080	9,816	28,638	2,477,563	197,078	8.64
1937	2,483,473	132,927	11,240	29,593	2,657,233	179,670	7.25
1938	2,509,691	142,257	11,785	30,732	2,694,465	157,366	5.92
1939	2,605,147	155,304	13,247	33,875	2,807,573	113,108	4.20
1940	2,772,159	167,917	15,876	34,310	2,990,262	182,689	6.51
1941	2,961,247	184,096	18,051	35,305	3,198,699	208,437	6.97
1942	2,834,808	187,431	19,913	38,292	3,080,444	-188,255	-3.70
1943	2,748,901	176,257	19,414	41,224	2,985,796	-94,648	-3.07
1944	2,779,243	191,672	22,309	43,406	3,036,630	50,834	1.70
1945	2,853,177	238,490	27,173	44,536	3,163,376	126,746	4.17
1946	3,097,882	307,816	36,353	47,773	3,489,824	326,448	10.32
1947	3,476,554	349,743	53,234	54,564	3,934,095	444,271	12.73
1948 to June 30	*	*	*	57,689	3,883,367		

— Indicates decrease.

* Registration by type not available.

COUNTY APPORTIONMENTS OF FUNDS DERIVED FROM MOTOR VEHICLE FEES AND FUEL TAXES

County	County apportionment of motor vehicle fees			County apportionment of motor vehicle fuel tax, Oct. 1, 1923 to June 30, 1947	Subtotal of apportionments prior to operation of the Collier-Burns Act	County apportionment of funds pursuant to Collier-Burns Highway Act of 1947		Total apportionment to counties, Jan. 1, 1914 to June 30, 1948
	1947		July 1, 1947 to Dec. 31, 1947			Jan. 1, 1948 to June 30, 1948		
	1914-1946	Apportionment Jan. 1, 1914 to Dec. 31, 1947						
Alameda.....	\$7,490,225 32	\$398,784 16	\$7,889,019 48	\$28,892,823 59	\$543,026 07	\$985,115 07	\$30,420,964 73	
Alpine.....	4,608 89	204 58	4,813 47	500,985 65	15,673 23	29,254 44	545,913 32	
Amador.....	195,091 41	6,361 70	141,753 11	753,856 73	40,394 64	71,142 57	1,038,978 85	
Butte.....	810,683 67	44,940 15	855,623 82	2,500,072 44	149,267 75	247,621 86	3,752,286 48	
Calaveras.....	130,924 15	6,863 05	137,787 20	783,901 09	68,974 91	110,621 57	1,101,284 77	
Colusa.....	258,543 47	9,494 24	268,037 71	999,340 32	80,394 62	126,881 64	1,474,654 29	
Contra Costa.....	\$1,547,633 02	\$134,651 94	1,682,284 96	\$3,032,328 32	6,715,613 28	359,250 77	7,266,680 59	
Del Norte.....	79,656 70	5,333 58	84,990 28	753,898 74	21,751 68	39,914 83	815,475 25	
El Dorado.....	179,378 18	12,205 23	191,583 41	1,115,753 98	79,916 51	132,482 47	1,328,152 96	
Fresno.....	3,621,105 46	181,074 30	3,702,179 76	8,957,095 06	415,273 64	693,421 69	13,767,970 15	
Glenn.....	294,940 81	12,609 36	307,550 17	\$1,106,746 94	1,414,297 11	149,769 72	1,659,199 85	
Humboldt.....	780,605 13	38,400 07	819,005 20	2,434,113 52	120,360 39	202,170 43	3,575,649 54	
Imperial.....	1,085,862 36	40,958 15	1,126,820 51	\$3,133,885 95	210,243 91	330,912 82	4,807,863 19	
Inyo.....	157,490 80	7,773 71	165,264 51	808,857 49	110,341 41	188,634 51	1,253,077 92	
Kern.....	\$2,203,992 52	\$135,885 70	2,339,878 22	\$6,262,247 79	319,234 05	545,047 15	9,466,407 21	
Kings.....	627,913 37	34,207 20	662,120 57	1,999,351 32	122,562 36	200,708 66	2,984,742 91	
Lake.....	164,815 84	10,602 50	175,418 34	869,516 00	58,231 46	96,488 79	1,996,654 26	
Lassen.....	218,856 37	10,887 52	229,743 89	998,979 92	124,468 96	190,668 79	1,543,861 56	
Los Angeles.....	\$42,210,970 35	\$2,574,769 71	44,785,740 08	\$120,557,784 91	3,444,029 89	6,287,287 17	175,075,742 03	
Madera.....	370,856 64	23,160 02	394,016 66	1,417,226 81	165,343,524 97	217,913 74	2,167,804 42	
Marin.....	636,035 68	41,151 83	677,187 51	2,234,401 47	68,328 36	98,258 72	3,107,793 04	
Mariposa.....	71,764 37	3,784 38	75,548 75	661,127 43	54,257 89	87,054 72	747,988 79	
Mendocino.....	409,960 51	22,072 53	432,033 04	1,477,474 99	109,532 97	176,283 48	2,156,283 48	
Merced.....	761,746 70	45,346 51	807,093 21	2,507,317 66	199,907 15	318,064 74	3,832,382 76	
Modoc.....	132,097 74	6,465 77	138,563 51	767,911 66	906,475 17	123,874 70	1,108,544 68	
Mono.....	24,746 37	1,168 83	25,915 20	546,887 71	59,897 16	93,738 08	726,438 15	
Monterey.....	1,060,503 83	69,656 21	1,130,162 04	\$3,508,491 55	50,729 66	281,997 33	5,051,380 58	
Napa.....	27,782 18	72,782 18	505,579 57	1,675,802 94	55,310 83	99,805 25	2,336,543 69	
Nevada.....	215,885 62	12,627 17	228,412 79	\$1,037,126 96	52,164 79	88,075 45	1,403,779 99	
Orange.....	2,587,878 68	146,347 67	2,734,226 35	\$7,245,547 46	205,712 46	379,566 28	10,565,052 55	

Placer.....	484,278 96	26,074 77	510,353 73	1,701,558 77	2,211,912 50	85,413 99	145,036 85	2,442,363 34
Plumas.....	135,498 30	8,147 25	143,645 55	807,993 59	951,639 15	64,929 04	104,451 70	1,121,019 88
Riverside.....	1,075,285 31	112,862 55	1,188,157 86	5,075,637 39	6,863,795 25	336,686 13	522,050 34	7,722,531 72
Sacramento.....	2,646,569 54	151,584 71	2,798,154 25	7,905,219 95	10,703,374 20	247,064 62	442,861 51	11,393,300 33
San Benito.....	242,430 82	11,043 36	253,474 18	1,011,193 60	1,264,667 78	46,974 23	79,886 71	1,391,528 72
San Bernardino.....	2,512,414 46	167,794 38	2,680,208 84	*7,427,714 09	10,107,922 93	390,264 00	673,901 05	11,172,087 98
San Diego.....	4,304,494 72	260,203 44	4,564,698 16	*2,789,376 18	7,384,074 34	405,596 28	745,807 71	18,585,478 33
San Francisco.....	8,135,418 68	361,011 82	3,496,430 50	*20,838,038 77	29,334,469 27	505,984 44	924,752 11	30,765,205 82
San Joaquin.....	2,267,639 54	129,335 51	2,396,974 84	6,301,931 53	8,698,906 37	206,141 95	350,502 68	9,255,551 00
San Luis Obispo.....	652,088 61	35,291 43	687,380 04	*2,135,785 38	2,823,165 42	137,853 55	226,689 08	3,187,708 05
San Mateo.....	1,415,829 82	109,062 10	1,524,891 92	*4,716,024 61	6,240,916 53	158,721 87	304,265 11	6,703,903 51
Santa Barbara.....	*1,312,540 79	454,841 82	1,377,382 61	*3,852,231 22	5,229,613 83	170,329 53	193,298 69	5,530,242 05
Santa Clara.....	3,042,207 11	171,438 10	3,220,645 21	8,598,925 90	11,789,571 11	240,234 51	450,070 38	12,479,876 00
Santa Cruz.....	802,337 16	46,364 40	848,701 56	2,598,065 57	3,446,767 13	80,373 26	145,028 75	3,672,169 14
Shasta.....	373,624 57	24,501 13	398,125 70	*1,436,902 91	1,835,028 61	123,271 93	199,007 92	2,157,308 46
Sierra.....	42,518 41	1,645 82	44,164 23	581,674 89	625,839 12	30,484 97	51,362 09	707,686 18
Siskiyou.....	444,776 97	22,028 46	466,805 43	*1,595,009 49	2,061,814 92	156,222 29	242,027 71	2,480,064 92
Solano.....	856,062 72	57,163 67	913,226 39	*2,765,443 73	3,676,670 12	99,239 38	167,406 10	3,945,315 60
Sonoma.....	1,423,468 79	72,200 87	1,495,669 66	*4,069,015 23	5,564,684 89	155,568 71	272,370 99	5,992,624 59
Stanislaus.....	1,484,426 69	89,992 17	1,574,418 86	4,232,823 42	5,807,242 28	206,103 65	356,535 19	6,369,881 12
Sutter.....	333,540 91	18,280 87	351,821 48	1,292,193 00	1,644,014 48	94,575 38	152,301 95	1,890,891 81
Tehama.....	299,164 10	14,044 29	313,208 39	*1,160,589 83	1,473,798 22	106,542 09	166,727 29	1,747,067 60
Trinity.....	42,720 42	2,738 35	45,458 77	*507,521 43	642,980 20	72,631 86	112,322 78	827,934 84
Tulare.....	1,833,755 48	103,209 96	1,936,965 44	5,103,374 58	7,040,340 02	344,595 80	557,152 64	7,942,088 46
Tuolumne.....	176,263 45	9,076 14	185,339 59	*879,347 75	1,064,687 34	55,897 10	91,171 25	1,211,465 69
Ventura.....	1,072,340 44	63,545 79	1,135,886 23	*3,372,308 22	4,508,194 45	105,980 42	192,478 61	4,806,653 48
Yolo.....	549,051 66	28,788 27	577,839 93	1,802,873 82	2,380,713 75	101,098 55	164,845 47	2,646,657 77
Yuba.....	306,271 25	17,654 63	323,925 88	*1,196,991 69	1,523,917 57	58,943 97	100,590 42	1,683,451 56
Totals.....	\$107,526,543 02	\$86,275,395 51	\$113,801,938 53	*\$319,227,108 30	\$433,029,046 83	\$12,110,311 93	\$21,076,251 18	\$460,215,609 94

† Deduct the following amounts for reimbursement of the Department of Motor Vehicles for salaries paid highway crossing guards:

1945-1946—Contra Costa \$1,574.84, Kern \$5,233.80, Los Angeles \$111,750.68, Santa Barbara \$2,069.70.

1947—Alameda \$1,618, Contra Costa \$1,265.50, Kern \$1,604, Los Angeles \$35,735, Santa Barbara \$1,959.

* Includes repayment of unemployment relief loans to county as provided in Section 23 of Chapter 207, Statutes of 1933 (for tabulation see First Annual Report).

APPORTIONMENT OF FUNDS DERIVED FROM MOTOR VEHICLE FEES AND FUEL TAXES**

	To counties	To State Highway Maintenance Fund	To State Highway Construction Fund	To State Highway Fund				Total	Total registration	Average per vehicle
				To Division of Highways	¼ cent to cities for state highways	¼ cent to cities for major streets	To city streets			
Oct. 1, 1923-Dec. 31, 1923	\$1,389,257 80	\$1,389,257 80						\$2,778,515 60	1,368,205	\$9 04
Jan. 1, 1924-Dec. 31, 1924	6,182,518 97	6,182,518 96						12,365,037 93	1,498,132	9 60
Jan. 1, 1925-Dec. 31, 1925	7,194,051 54	7,194,051 54						14,388,103 08	1,664,321	9 93
Jan. 1, 1926-Dec. 31, 1926	8,260,360 86	8,260,360 86						16,520,721 72	1,762,873	12 76
Jan. 1, 1927-Dec. 31, 1927	9,349,534 81	9,349,534 82	\$3,788,334 00					22,487,403 63	1,876,032	15 39
Jan. 1, 1928-Dec. 31, 1928	9,839,491 88	9,839,491 90	9,637,204 99					29,316,188 77	2,062,143	16 69
Jan. 1, 1929-Dec. 31, 1929	11,319,524 47	11,319,524 47	11,155,181 54					33,794,230 48	2,136,630	16 65
Jan. 1, 1930-Dec. 31, 1930	11,858,452 77	11,858,452 77	11,857,727 76					35,574,633 30	2,145,474	14 61
Jan. 1, 1931-Dec. 31, 1931	10,451,671 52	10,451,671 52	10,451,671 53					36,239,918 86	2,080,257	17 42
Jan. 1, 1932-Dec. 31, 1932	12,079,972 95	12,079,972 95	12,079,972 95					35,118,894 95	2,075,425	16 92
Jan. 1, 1933-Dec. 31, 1933	11,706,298 32	5,519,290 65	5,519,290 66	\$10,827,263 41	\$1,546,751 91			36,293,594 84	2,120,453	17 12
Jan. 1, 1934-Dec. 31, 1934	12,097,841 61			21,171,222 82	3,024,460 41			39,586,218 01	2,280,485	17 47
Jan. 1, 1935-Dec. 31, 1935	13,277,072 67			21,420,000 91	3,319,901 49			42,869,584 02	2,476,563	17 31
Jan. 1, 1936-Dec. 31, 1936	14,289,861 54			21,434,808 98	3,572,457 05	\$1,819,242 94†		46,357,074 70	2,694,465	17 31
Jan. 1, 1937-Dec. 31, 1937	15,452,558 23			23,178,837 35	3,863,139 56	3,572,457 05		51,172,163 30	2,807,373	17 53
Jan. 1, 1938-Dec. 31, 1938	15,547,174 80			23,320,762 20	3,886,793 70	3,886,793 70		56,968,073 78	3,198,099	17 81
Jan. 1, 1939-Dec. 31, 1939	16,405,603 51			24,698,405 25	4,101,400 88	4,101,400 88		61,703,223 90	3,434,095	14 40
Jan. 1, 1940-Dec. 31, 1940	17,057,357 76			25,586,081 66	4,264,346 94	4,264,346 94				
Jan. 1, 1941-Dec. 31, 1941	18,989,357 93			28,484,036 88	4,747,339 46	4,747,339 46		41,563,894 42	2,985,796	13 78
Jan. 1, 1942-Dec. 31, 1942	17,511,229 06			26,266,843 62	4,377,807 27	4,377,807 27		52,553,087 22	3,080,444	17 05
Jan. 1, 1943-Dec. 31, 1943	13,854,631 47			20,781,947 23	3,463,657 86	3,463,657 86		49,604,495 05	3,163,376	15 68
Jan. 1, 1944-Dec. 31, 1944	13,850,402 91			20,925,604 36	3,487,000 73	3,487,000 73		61,703,223 90	3,434,095	14 40
Jan. 1, 1945-Dec. 31, 1945	16,834,831 68			24,892,247 59	4,133,707 89	4,133,707 89				
Jan. 1, 1946-Dec. 31, 1946	22,822,158 83			34,233,223 43	5,705,539 71	5,705,539 71				
Jan. 1, 1947-Dec. 31, 1947*	19,030,607 18			28,685,223 41	1,730,073 81	1,730,073 81				
Jan. 1, 1948-June 30, 1948†	21,076,251 18			32,352,250 07		7,189,962 57	\$8,274,722 65			
Totals	\$359,333,966 66	\$93,444,128 23	\$64,489,383 43	\$405,787,564 61	\$58,176,443 79	\$57,564,461 67	\$8,274,722 65	\$1,047,070,671 04		
†Includes \$2,500,000 appropriated for the Code Commission by Chapter 698, Statutes 1935.										
									4-year average of 2 cents tax 19-year average of 3 cents tax	
									\$10 33 16 67	

2-cent tax per gallon from October 1, 1923, to July 28, 1927. Apportioned 1 cent to counties, 1 cent to State Highway Maintenance Fund.

3-cent tax per gallon from July 29, 1927, to June 30, 1933. Apportioned 1 cent to counties, 1 cent to State Highway Maintenance Fund, 1 cent to State Highway Construction Fund.

3-cent tax per gallon from July 1, 1933, to June 30, 1935. Apportioned 1 cent to counties, 1 cent to State Highway Fund, 1 cent to cities for state highways.

8-cent tax per gallon from July 1, 1935, to June 30, 1947. Apportioned 1 cent to counties, 1½ cents to Division of Highways, ½ cent to cities for state highways, ½ cent to cities for streets of major importance.

43-cent tax per gallon from July 1, 1947. Fuel tax apportioned 1½ cents to counties, 2½ cents to Division of Highways, 8 cents to city streets.

* Apportionments for the last half of 1947 were made to effect the transition from former acts to operation under the Collier-Burns Act of 1947.

† Apportionments for the last half of 1948 were made according to the Collier-Burns Highway Act of 1947.

** Apportionments prior to July 1, 1947, were made from fuel taxes only.

APPENDIX C

CONTRACT STATISTICS

- (a) Completed Contracts—July 1, 1946, to June 30, 1948.
- (b) Incomplete Contracts—June 30, 1948.

COMPLETED CONTRACTS—June 30, 1948

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4T48	Alameda	5	A	Near Greenville		11/21/46	Day Labor	Truck Scale	\$12,000	\$700	\$12,700
4TC35	Alameda	5	B	San Miguel Ave.-Parkway	0.4	5/16/47	McGuire & Hester	Storm Drain	22,566	1,500	24,066
4TC41	Alameda	5	Oak	Toll Plaza to Distribution Structure	0.9	6/18/47	Chas. L. Harney, Inc.	Additional Traffic Lanes	130,450	12,000	142,450
BBC-40	Alameda	5	Oak	Bay Bridge Toll Plaza		4/ 9/47	Cyclone Fence Div., Amer. Steel & Wire Co.	Fence	4,465		4,465
4TC43-P	Alameda	5	Oak	Bay Bridge Toll Plaza	0.6	9/ 8/47	San Francisco Br. Co.	Sand Fill	384,718	22,000	406,718
4TC44-P	Alameda	5	Oak	Bay Bridge Toll Plaza	0.6	9/12/47	Piombo Const. Co.	Slope Protection	131,315	15,500	146,815
15T3	Ala.-S.F.	5, 68	Oak-S.F.	See San Francisco County							
4TC25	Alameda	5, 69	B, C, B	Bet. Dublin & Mission San Jose & Bet. Alvarado & San Leandro	7.6	6/ 7/46	A. S. Jones	Repair with C.R.B. & P.M.S.	161,255	16,747	178,002
4WC22	Alameda	5, 69	C, A	Bet. Warm Springs & Mission San Jose & Bet. Warm Springs & Centerville	8.3	3/11/46	A. S. Jones	Repair Shoulders	40,118	8,925	49,043
4WC29-P	Ala., C.C.	5, 107	B, A	Hayward to Dublin & Danville to 3.1 Mi. south	5.3	6/ 7/47	J. R. Armstrong	Plant-Mixed Surfacing	151,804	20,300	172,404
4W27	Alameda	69	B	In San Lorenzo Village		10/29/46	Day Labor	Traffic Signals	5,974	371	6,345
4TC23	Ala.-C.C.	69, 14	Alb. Reh, E/ Cr. A, Pin, Her, B	Bet. El Cerrito Hill Overhead in Albany & Carquinez Bridge	10.5	5/23/46	J. R. Armstrong Const. Co.	Repair with C.R.B. P.M.S. & Pine Tr. & Construct Decelerating Lane	58,410	6,832	65,242
4WC31-F	Alameda	69	Oak	1 Mi. N. of S.C.L. of Oakland to 0.3 Mi. S. of High St.	2.3	6/25/47	Johnson-Western Co. & Amer. Pipe & Const. Co.	Grade	861,782	80,000	941,782
14WC8	Alameda	69	Oak	5th Ave. Overhead		6/21/46	Duncan-Harrelson Co. & Stolte, Inc.	Overcrossing	1,762,507	85,000	1,847,507
14WC11-F	Alameda	69	Oak	At 29th Ave. in Oakland		6/27/47	Lew Jones Const. Co.	Overcrossing	155,670	18,500	174,170
14WC9	Alameda	69	Oak	At Fruitvale Ave.		12/ 9/46	S. J. Ameresco Const. Co.	Substructure of Overcrossing	390,075	40,000	430,075
4TMC3	Alameda	69	Oak	Cypress St. from Dist. Struct. to Seventh St.		3/11/46	Lee J. Immel	Widen & Surface	150,410		150,410
4WC27	Alameda	105	B	On E. 14th St. Bet. Plaza Dr. & 158th Ave.		12/10/46	Wheeler Const. Co.	R. C. Culvert	11,716	2,826	14,542

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost.	Const. engr.	Total
14WLC33	Alameda	107	A	At Alameda Creek	---	6/22/46	R. G. Clifford & Louis Basoffi & Son	Bridge & Overcrossing	\$4 6,796	\$40,000	\$446,796
4TMC9	Alameda	206	Ber	Folger Ave. in Berkeley	---	10/ 8/47	Archer Equipment Co.	Drainage Pump	1,771	---	1,771
4ANC14	Alameda	Oak.	Airport	Bet. Maitland Dr. & Earhart Rd. in Aux. Naval Air Sta.	0.2	7/10/46	Gallagher & Burk	Repair with P.M.S. & Construct Shldr.	4,150	804	4,954
4DC1	Alameda	FAS 1080	---	On "A" St. & Redwood Rd. Bet. San Lorenzo Cr. Bridge & Proctor Rd.	2.7	7/26/46	Hayward Bldg. Matl. Co.	Grading & Surfacing	144,486	1,534	146,020
---	Alameda	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	15,397	---	15,397
---	Alpine	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	350	---	350
14WLC52	Alameda	65	C, A	See Calaveras	---	---	---	---	---	---	---
---	Anador	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	4,053	20	4,073
3TC24	Butte	3	B,C,Che	Bet. Oroville Wyre & Nelson, Bet. Durban R.R. Xing & Chico, & Bet. Big Chico Creek & Sixth St. in Chico	11.8	5/16/46	Lester L. Rice	P.M.S. on C.R.B. & Construct Shldr.	108,024	7,052	115,076
2T42	Butte	21	C	Jarboe Pass-Plumas County Line	1.5	4/17/47	Day Labor	Resurfacing	6,480	500	6,980
14DC3	Butte	FAS 1046	---	Across South Fork of Feather River at Bidwell's Bar	---	3/26/47	Day Contracting Co.	Bridge	106,033	9,400	115,433
---	Butte	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	4,883	21	4,904
14WLC35	Calaveras	24	Ang	Across Angels Creek	---	6/24/46	J. Henry Harris	Concrete Bridge & Approaches	39,007	4,285	43,292
14WLC52	Cal. Ama	65	A, C	Across Mokelumne River	---	6/ 4/47	Charles Scott	Bridge Repair	3,973	1,300	5,273
14WC7	Calaveras	65	B	About 9 Mi. N. of Angels Camp	---	6/11/46	Bati Rocca	Construct Cattle Pass	4,787	1,548	6,335
10AN15	Calaveras	Access	---	Bet. Sandy Gulch Mill Pond & J. P. Lodge Rd.	---	5/22/45	Purchase Oil & Provide Engineering	---	5,450	---	5,450
10AN21	Calaveras	Access	---	Toyon to West Point	15.6	10/18/46	Day Labor	Repairs	26,107	828	26,935

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
-----	Calaveras	-----	-----	Various Locations	-----	-----	-----	Minor Contracts & D.L. Projects	\$3,296	-----	\$3,296
3T66	Colusa	7	A	Arbuckle to 0.6 Mi. S. of Geneva	3.0	5/12/47	Day Labor	Improve Shldr.	10,834	\$1,000	11,834
3TC22	Colusa	7	A, B	Bet. 3 Mi. N. of Arbuckle & 4 Mi. S. of Williams	3.3	2/ 5/46	Harns Bros.	Grading & Plant Mixed Surfacing	220,143	34,347	254,490
3TC31	Colusa	7	Wms	Bet. 239 Ft. S. of "F" St. & "D" St. in Williams	0.3	8/19/46	Harns Bros.	Repair with P.M.S.	4,805	457	5,262
-----	Colusa	-----	-----	Various Locations	-----	-----	-----	Minor Contracts & D.L. Projects	4,158	147	4,305
COF-8	C.C. Sol.	7	A, F	On Carquinez Bridge	-----	3/25/47	Minton & Kubon	Railings	26,296	-----	26,296
4TC23	C.C.-Ala.	14, 69	-----	See Alameda County	-----	-----	-----	-----	-----	-----	-----
4TC29	Contra Costa	14	A	At San Pablo Bet. Wildcat Cr. & San Pablo Cr.	1.0	8/24/46	J. R. Armstrong	Widening & Paving	87,964	24,169	112,133
4TC31	Contra Costa	14	B	Bet. Fourth St. & First St. in Rodeo	0.3	10/14/46	Lee J. Immel	Widen & Pave with A. C.	16,815	2,566	19,381
4T50	Contra Costa	14	B	At Second St. & Parker Ave.	-----	11/19/46	Day Labor	Traffic Signals	8,100	-----	8,100
4TC38	Contra Costa	14	B	At Rodeo Bet. Sixth St. & Fourth St.	0.3	5/28/47	Morgan Construction Co.	Widen with A. C. & Construct Shldr.	11,527	1,500	13,027
4TC40-P	Contra Costa	14	ECr, Rch	In El Cerrito & Richmond on San Pablo Ave. at 10 Intersections, Bet. Stockton Ave. & McBryde	-----	6/24/47	Severin Electric Co.	Traffic Signals	59,318	3,860	63,178
4W39	Contra Costa	69	ECr	Potrero Ave.	-----	11/ 1/46	Day Labor	Signals	8,250	600	8,850
4W31	Contra Costa	75	A	At Oakland St. & Moraga Rd.	-----	8/14/46	Day Labor	Signals	15,332	798	16,130
14WC25	Contra Costa	75	A, B	Bet. Broadway Tunnel & 3.5 Mi. E. of Walnut Creek	5.3	6/25/46	N. M. Ball Sons	Repair with Imported Borrow & P.M.S.	25,177	3,942	29,119
4WC26-F	Contra Costa	75	B, C	Bet. Junct. Rte. 106 to 1 Mi. E. of Port Chicago Rd.	2.6	6/28/46	Harns Bros.	Grade & Pave	599,379	78,000	677,379
4WC23	Contra Costa	75	C, D	Bet. Pittsburg & 4 Mi. E. of Brentwood	10.1	4/22/46	Lee J. Immel	Widen Shoulders & Bridge	82,463	9,422	91,885
4AWC2	Contra Costa	75, 106	E, Cnd, C	Bet. Concord Ave. & 0.4 Mi. W. of Ohmer Station	2.3	3/12/46	Guy F. Atkinson Co.	Grade & P.C.C. Pavement	225,987	36,716	262,403
4W50	Contra Costa	106	C	Bet. Muir Sta. & Rte. 75	1.0	3/31/47	Day Labor	Resurfacing	18,953	1,000	19,953

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4WC29-P	C.C. Ala.	107, 5	A, B	See Alameda County							
	Contra Costa			Various Locations				Minor Contracts & D.L. Projects	\$950		\$950
1744	Del Norte	1	A	High Prairie Creek		9/10/47	Day Labor	Repair Bridge	5,898	\$162	6,060
1717	Del Norte	1	A	At Panther Cr. Bridge Br. No. 125		9/28/45	Day Labor	Repair Bridge	6,212	111	6,323
17C13	Del Norte	1	B	Bet. 6.3 Mi. & 2.6 Mi. S. of Crescent City	3.7	5/3/46	W. C. Railing	Imp. Base Mat'l. & Seal Coat	105,329	9,330	114,659
	Del Norte			Various Locations				Minor Contracts & D.L. Projects	3,320	40	3,360
37C23-F	El Dorado	11	B	Bet. Shingle Springs & 1.25 Mi. W. of El Dorado	3.4	2/19/46	Utah Construction Co.	Grading & Plant Mixed Surfacing	271,229	47,350	318,579
3W17	El Dorado	93	A	Bet. Rte. 65 near Placerville & Pino Grande Rd.	3.2	1/24/46	Day Labor	Widen, Improve Alignment & Oil Treat	29,913	2,393	32,306
	El Dorado			Various Locations				Minor Contracts & D.L. Projects	11,774		11,774
67C4-F	Fresno	4	A, Fow, B	Bet. ¼ Mi. S. of Fowler & Calwa Overpass	6.5	10/8/46	Gunner Corporation, & J. E. Haddock, Ltd.	Grade & Plant Mixed Surfacing	894,567	71,673	876,240
67C7	Fresno	4	A, Fow, B	Bet. ¼ Mi. S. of Fowler & Calwa Overpass	6.4	8/27/47	F. Gunner Gramatky	Barrier Curbs	16,509	1,200	17,709
67C3	Fresno	4	B, Fre	Bet. Calwa Overpass & Fresno	2.1	1/17/46	Marshall S. Hanrahan	Grading & P.C.C. Pavement	374,675	43,700	418,375
6WC6-P	Fresno	4, 125	B, A	Bet. Fowler & Calwa Overpass & Bet. 4.6 Mi. N. of Kings County Line & Mountain View Ave.							
					11.0	4/2/47	Gunner Corporation	Resurface with Plant Mix Surfacing	106,724	9,000	115,724
14WLC43	Fresno	41	F	Across Kings Slough		1/8/47	Lord & Bishop	Reconstruct Bridge	21,573	1,098	22,671
14WLC27	Fresno	41	B	Bet. 2 Mi. E. of Mendota & 2 Mi. W. of Tranquility Rd.		12/21/45	Dan Caputo & Edward Keeble	12 R.C. Bridges & R.C. Box Culvert	194,189	14,433	208,622
14WLC60	Fresno	41	M	Across Colony & Helm Canals		9/5/47	E. G. Perham	Reinforced Concrete Bridges	49,799	5,900	55,699
6W8	Fresno	76	B	At Big Dry Creek, Br. No. 42-91		9/13/46	Day Labor	Widen Bridge with R.C. Slab	7,303	25	7,328
6WC5-F	Fresno	125	C	Bet. Shields Ave. & Herndon Ave.	4.0	11/14/46	Basich Bros. Const. Co. & Basich Bros.	Grade & Pave	339,278	33,800	373,078

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6DC5	Fresno	FAS 568		Highland Ave. Bet. Kings Co. Line & Elk-horn Ave.	3.3	6/ 7/47	Valley Paving & Const. Co.	Grading & Surfacing	\$143,320	\$15,500	\$158,820
14DC12	Fre, Kin.	FAS 623		See Kings County							
6DC1	Fresno	FAS 809		On Fresno-Coalinga Rd. Bet. Mt. Whitney Ave. & State Highway Rte. 10	8.6	11/13/46	Louis Biasotti & Son	Grade & Surface	153,818	1,550	155,368
14DC16	Fre, Mad	FAS 811		Across San Joaquin River & Overflow at Firebaugh		5/19/47	Charles MacClosky Co.	2 Steel Bridges	251,944	26,200	278,144
6DC3	Fresno	FAS 823		On Reed Ave. Bet. Manning Ave. & Rte. 41	8.0	5/16/47	A. Teichert & Son, Inc.	Grade & Surface	197,337	19,200	216,537
	Fresno			Various Locations				Minor Contracts & D.L. Projects	7,498	64	7,562
3WL23	Glenn	47	A	Glenn-Colusa Canal Br. No. 11-18		2/21/46	Day Labor	Repair Substructure	7,268	32	7,300
1TC20	Humboldt	1	D, E	Bet. Jordan Cr. & South Scotia Bridge	1.2	6/12/47	Clements & Co.	Plant Mixed Surfacing & Seal Coat	30,649	3,400	34,049
1TC18	Humboldt	1	E	Bet. Greenlaw Bluffs & Scotia	3.2	4/ 2/47	Clements & Co.	Plant Mixed Surfacing & Seal Coat	90,289	9,000	99,289
1TC11	Humboldt	1	G	Bet. Loleta & Field's Landing	4.0	4/16/46	Mercer-Fraser Co.	Reinforce Base & P.M.S.	93,955	9,064	103,019
1TC8	Humboldt	1	G, I, J	Bet. Loleta & Patrick's Point	7.5	5/21/45	Mercer-Fraser Co.	Repair with Imp. Base & P.M. Bit. Mad.	181,755	18,869	200,624
1TC12	Humboldt	1	J	Bet. Patrick's Point & Big Lagoon	3.4	4/30/46	Mercer-Fraser Co.	P.M.S. on Imp. Mad. Base	98,347	6,865	105,212
14WL228-F	Humboldt	20	A	At Mad River		1/ 5/46	Mercer-Fraser Co.	Bridge & Approaches	215,600	27,500	243,100
1WC12-F	Humboldt	20	B	Bet. 1.2 Mi. E. of Korb Rd. & 2.7 Mi. E. of Redwood Summit	10.0	3/26/47	W. C. Railing	Base & Stockpile Screenings	97,418	7,604	105,022
1W25	Humboldt	20	B, C	Bet. Blue Lake & 1 Mi. E. of Redwood Creek	16.4	9/17/46	Day Labor	Grading & Seal Coat	193,655	6,901	200,556
1WC11	Humboldt	20	B C	Bet. Redwood Summit & 1 Mi. E. of Redwood Cr.	4.7	10/25/46	W. C. Railing	Imported Base Material	59,973	2,775	62,748
14WLC51	Humboldt	20	C	Across Redwood Creek		5/28/47	Osborne Engr. Co.	Repair Steel Truss	11,518	800	12,318
14WLC59	Humboldt	20	C	Across Redwood Creek		6/30/47	Tom Hull	Erect Steel Truss Span	15,546	2,500	18,046
41W10	Hum, Tri	20	D, CD	Bet. Willow Cr. & Crossing of Trinity River		1/23/42	Prison Labor	Const. Camp; Grade & Surface	1,115,364	88,905	1,204,269

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost.	Const. engr.	Total
1DC1	Humboldt	FAS 501		Bet. Arcata & Ryans Slough Bridge	8.0	10/ 3/46	Mercer-Fraser Co.	Grade & Surface	\$193,802	\$18,400	\$212,202
1DC4	Humboldt	FAS 968		Bet. Jct. Rte. 20, E. of Blue Lake & Korbek	1.3	5/24/47	Mercer-Fraser Co.	Grade & Surface	56,118	5,485	61,603
1DC2	Humboldt	FAS 970		On Elk River Rd. Bet. Junct. with Rte. 1, S. of Eureka & Elk River School	2.2	3/26/47	Mercer-Fraser Co.	Grade & Seal Coat	62,508	6,000	68,508
1WL28	Humboldt	35	B	At Slide Bridge		8/14/46	Day Labor	Replace Bridge	6,015	32	6,047
	Humboldt			Various Locations				Minor Contracts & D.L. Projects	5,222		5,222
14VC46	Imperial	12	B	Across Apache Wash & Sandy Ditch		1/26/48	E. G. Perham	Redeck 2 Bridges	29,517	4,000	33,517
14VC16-F	Imperial	26	B, C	At Lone Tree Wash & San Felipe Creek		10/31/46	Bent Const. Co.	Bridge & Approaches	254,337	31,500	285,837
11XC12	Imperial	26, 27	J, ECn	Bet. Calexico & El Centro & in El Centro	12.7	8/ 7/46	Tanner Const. Co.	Grade Portions, Improve Shldr. & Plant Mixed Surfacing	237,389	26,799	264,188
11VC20-P	Imperial	26	ECn	Intersections of Fourth St. with Main St. & Eighth St. with Adams Ave. in El Centro		1/20/48	C. E. Seymour	Traffic Signal Systems	19,554	2,000	21,554
11VC14-F	Imperial	26	ECn	On Fourth St. & Adams Ave., Bet. Main St. & Imperial Ave.	1.2	1/28/47	R. E. Hazard Const. Co.	Grade & Pave	369,989	40,500	410,489
14VC35	Imperial	27	B	Bet. Grays Wells & Winterhaven		9/ 8/47	C. B. Tuttle Co.	Repair 12 Bridges	54,192	5,500	59,692
14VC18	Imperial	27	B	Near Winterhaven		8/30/46	Tanner Const. Co.	Repair 8 Bridges	54,453	4,691	59,144
11XC18	Imperial	201 187	A, B, C A, B, C	Bet. Jct. Rte. 26, 1.5 Mi. E. of Heber & 1.9 Mi. S. of Calipatria & Bet. 3.6 Mi. N. of Bond's Corner & Alamo							
14VC38	Imperial	202	A, B	At New River & Greeson Wash	12.0	6/30/47	MacArthur & Son	Repair with Road Mixed Surface	80,582	9,000	89,582
11X35	Imperial	202	C	At Briar & Central Main Canals	0.16	10/20/47	G. W. Peterson	Bridges & Approaches	54,697	8,300	62,997
	Imperial			Various Locations				Lengthen Central Canal Bridge & Place Embankment Protection at Both Structures	8,750	12	8,762
9VC6-F	Inyo, Kern	23	G, E	See Kern County				Minor Contracts & D.L. Projects	5,016	2	5,018
9VC11	Inyo	23	H, I	From 2.0 Mi. S. to 10.7 Mi. S. of Olancha	0.4	1/21/48	Bishop Engr. & Const. Co.	Grade & Bit. Surf. Treatment	12,669	2,400	15,069

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
9RXC1 9XC4	Inyo. Inyo.	76 76 127	A A, Bis, C	Bet. Laws & Mono County Line Bet. Rte. 23 & Mono County Line, in Bishop, Bet. W. City Limits & Rte. 23 & Bet. Rte. 23 & Keeler.	3.2	9/18/47	Bishop Engr. & Const. Co.	Construct Fence.	\$6,115	\$850	\$6,965
9VC9	Inyo.	127	N	At Shoshone	0.7	5/16/47	Brown & Krull	Road Mix Surfacing	17,572	2,000	19,572
9DC1	Inyo.	FAS 1070		Near Bishop, on Warm Springs Rd. & Poleta Rd.	4.4	11/13/47	A. A. Edmonson	Grade & Road Mix Surfacing	26,455	4,000	30,455
9DC4	Inyo.	FAS 1071, 1069		On Pine Cr. Rd. & Glacier Lodge Rd.	4.2	5/16/47	Basich Bros. Const. Co. & Basich Bros.	Grade, Surface, & 2 Bridges.	116,917	9,000	125,917
6VC6	Kern.	4	A	Various Locations		9/22/47	Westbrook & Pope	Grade & Surface	79,867	11,000	90,867
6VC5 6VC11-PP	Kern. Kern.	4 4	C, Bkd C, Bkd	Bet. 1.6 Mi. & 1.25 Mi. S. of Grapevine Station. Bet. Brundage Lane & 24th St. Bet. Brundage Lane & 21st St.	1.9	5/16/46 4/22/46 10/23/46	Griffith Company Griffith Company Oilfield Electric Co.	Traffic Deflector. Grade & P.C.C. & A.C. Paving. Traffic Signals	21,130 435,612 46,532	2,350 48,101 5,150	23,480 483,713 51,682
6VC7	Kern.	4	D, E	Bet. Standard Oil Tank Farm & Cawelo.		5/ 7/46	Geo. Von Kleinsmid	Barrier Posts	7,028	2,800	9,828
6VC10-F	Kern.	4	E	Bet. Cawelo & Famoso Underpass.	6.7	10/17/46	Griffith Company	Grade & Pave.	517,044	56,600	573,644
6VC8	Kern.	4	F, Din	Bet. Famoso & Cecil Ave., in Delano.	10.4	5/27/46	Griffith Company	Repair with P.M.S.	93,215	8,478	101,693
9VC4-F	Kern.	23	D	At Freeman Gulch.		2/19/46	E. W. Elliott Const. Co.	Bridge & Approaches	77,971	15,100	93,071
9VC6-F	Ker, Iny.	23	E, G	Bet. Indian Wells & Little Lake.	2.7	4/21/47	Basich Bros. Const. Co. & Basich Bros.	Grade, Surface, & Bridge	203,942	20,000	223,942
6X14	Kern.	33	B	Bet. Blackwells Corner & Harts Sta.		3/21/46	Day Labor	Restore Borders	16,996	25	17,021
6XC7	Kern.	33	C	Bet. Lost Hills & Wasco.	4.7	4/ 5/46	Oilfields Trucking Co. & Phoenix Const. Co.	Widen Shldr.	25,813	4,198	30,011
6XC8	Kern.	33	C	Bet. 8.7 Mi. & 2.0 Mi. W. of Wasco	6.7	6/24/46	Griffith Company	Repair with P.M.S. & Seal Coat	54,324	7,000	61,324
6XC13-P	Ker, Tul.	33, 4	D, A	See Tulare County							
6X21	Kern.	57	A	Bet. South Boundary & Maricopa.	2.4	3/20/47	Day Labor	Resurfacing	17,700	250	17,950

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6X25	Kern	57	C	At Teucya Creek	---	5/ 1/47	Day Labor	Arch Culvert	\$9,800	\$350	\$10,150
6XC15	Kern	57	E	Bet. 0.4 Mi. W. of Cottonwood Cr. & Cottonwood Cr.	0.4	6/17/47	James E. Anderson	Scarify & Subsoiling	4,520	900	5,420
9VC5-F	Kern	58	A	Bet. 12 Mi. E. of Mojave & Muroc Jct.	5.0	1/28/47	Basich Bros. Const. Co. & Basich Bros.	Grade & Plant Mixed Surfacing	148,886	21,000	169,886
9VC8	Kern	58	B	Bet. Muroc Jct. & 6.5 Mi. E.	6.5	5/ 7/47	Basich Bros. Const. Co. & Basich Bros.	Repair with Road Mixed Surf.	31,429	3,350	34,779
14VC39	Kern	58	D	Across Walker Basin Cr. & Caliente Cr.	---	11/20/47	N. M. Saliba Co.	Redeck 3 Bridges	30,720	4,700	35,420
6XC11-F	Kern	58	E, F, Thpi	Bet. Keene & Tehachapi	10.2	12/31/46	Guy F. Atkinson Co.	Grade, Surface & Bridges	1,145,913	87,000	1,232,913
14XC8	Kern	58	G	Across Cache Cr. & Los Angeles Aqueduct	---	12/11/45	E. W. Elliott Const. Co.	Plate Girder & R. C. Bridges	90,355	11,862	102,217
14VC40	Kern	58	K	Across Main Drainage Canal	---	12/11/47	E. G. Perham	Reinforced Concrete Bridge	22,355	4,100	26,455
6XC16	Kern	58	L	On Oak St. at Bakersfield	---	6/30/47	Rexroth & Rexroth	Remove Girder Bridge	12,220	1,200	13,420
6XC9-F	Kern	129	A	Bet. Rte. 4 & 5 Mi. N.	5.1	10/14/46	Geo. E. France	Grade & Surface	185,528	26,900	212,428
6XC10-F	Ker, Tul.	129	AB, A	Bet. Peso Cr. & Ducot.	18.3	12/23/46	Rand Const. Co.	Grade & Surface	292,712	48,000	340,712
14DC18	Kern	FAS 575	---	Across Kern River	---	5/28/47	O. B. Pierson	R. C. Slab Bridge	82,089	2,250	84,339
6DC2	Kern	FAS 884	---	On Comanche Dr., Bet. State Hwy. Rte. 58 & 3.3 Mi. S'ly	3.3	5/ 1/47	Rexroth & Rexroth	Grade & Surface	34,975	2,000	36,975
6DC4	Kern	FAS 889	---	Bet. Wasco & Elmo Hwy.	6.1	6/ 4/47	Rand Const. Co.	Grade & Surface	151,004	7,700	158,704
---	Kern	---	---	Various Locations	---	---	---	Minor Contracts & D. L. Projects	38,875	158	39,033
6WC4	Kings	125	D	Bet. Fifth Std. Parallel & 1.5 Mi. N.	1.5	1/21/46	W. C. Railing	Grading & Road Mix Surfacing	65,617	10,509	76,126
14DC12	Kin, Fre.	FAS 623	---	Across Kings River near Hardwick	---	5/ 1/47	Klay Bennett Const. Co.	R. C. Bridge	119,374	2,500	121,874
6DC7	Kings	FAS 943	---	Bet. Corcoran & 5.3 Mi. S.	5.3	11/13/47	C. M. Syar	Grade, C. R. B. & P. M. S.	137,055	14,000	151,055
---	Kings	---	---	Various Locations	---	---	---	Minor Contracts & D. L. Projects	786	---	786

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
1WLC6	Lak, Nap.	49	A, A	See Napa County		9/19/46	Day Labor	Replace Bridges.	\$7,871	\$38	\$7,909
1W28	Lake	49	C	At Burns Valley & Molesworth Creeks.		4/24/47	Arthur B. Siri	Bridge & Approaches.	33,829	6,200	40,029
14WLC49	Lake	89	B, C	At Kelsey Cr. at Cobb.		7/19/46	A. Soda & Son.	Bridge & Approaches.	209,824	17,200	227,024
14WLC36-F	Lake	89	D	Across Kelsey Cr. at Kelseyville.							
1WC10	Lake	89	E	Bet. 1.2 Mi. N. of Rodman Narrows & Rte. 15.	2.0	3/26/46	Louis Biasotti & Son.	Grading & Plant Mixed Surfing	155,489	23,540	179,029
14WLC30-F	Lake	89	E	Across Robinson Cr. & Scott Cr.		5/7/46	Kiss Crane Co.	Two Bridges.	144,290	14,300	158,590
	Lake			Various Locations.				Minor Contracts & D.L. Projects.	6,248		6,248
2TC8	Las, Sha.	28	A, B, E	See Shasta County							
2TC20	Las, Plu.	29	A, A	See Plumas County							
2WC6	Lassen	29	D	Bet. 2 Mi. N. of Milford & Bird Flat.	12.4	4/9/47	Clements & Co.	Plant Mixed Surfing.	130,162	14,000	144,162
2WC4	Lassen	29	D	Bet. 1.5 Mi. W. of Bird Flat & Doyle.	7.5	1/17/46	The Utah Construction Co.	Grading & Plant Mixed Surfing	237,117	26,413	263,530
2WC5	Lassen	73	B	Bet. Viewland & Secret Valley.	13.8	4/16/46	E. B. Bishop	Gravel Base & Plant Mixed Surf.	122,258	9,615	131,873
2W37	Lassen	73	E, F, G	Bet. Horse Lake Rd. & Modoc County Line.	5.2	12/10/46	Day Labor	Resurfacing.	31,934	560	32,494
2WC2	Las, Mod.	73, 28 210	Var	Bet. Horse Lake Rd. & Lakeview Jct. & Bet. Alturas & Stroughold.	60	4/20/45	A. A. Tieslau & Son.	Plant Mixed Bit. Mtl. & Seal Coat	134,589	9,622	144,211
2DC7	Lassen	FAS 988		Susanville to northside Willow Cr. Valley.	17.5	7/21/47	A. Teichert & Son. Inc.	Grade & R.M.S.	293,935	31,000	324,935
	Lassen			Various Locations.				Minor Contracts & D.L. Projects.	2,898	2	2,900
7VC21	Los Angeles	2	L.A.	On & Adjacent to Santa Ana Parkway Bet. Soto St. & Indiana St.		7/15/46	Mike Radich & Co.	Grade & Construct Storm Drain & Sanitary Sewer.	375,885	26,733	402,618
7VC24	Los Angeles	2	L.A.	Bet. Diamond St. & Sunset Blvd.		10/24/46	Chas. T. Brown	Storm Drain & Sanitary Sewer.	185,885	11,873	197,758
14VC15	Los Angeles	2	L.A.	On Santa Ana Parkway at First St.		7/19/46	Haddock Co.	R.C. Undercrossing.	175,255	7,260	182,515
7VC39	Los Angeles	2	D, Mtbl	Goodrich Blvd. to Concourse Ave.		6/18/47	Econolite Corp.	Signals.	33,003	3,000	36,003

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7VC50	Los Angeles	2	D, Wit	Whittier Blvd. Painter Ave. Redman Ave.	-----	11/26/47	Electric & Machinery Service Inc.	Signals.	\$33,821	\$2,550	\$36,371
7VC16	Los Angeles	2	L.A.	Kearney to Soto Sts.	-----	1/14/46	Peter Kiewit Sons' Co.	P.C.C. & A.C.	1,376,829	132,600	1,509,429
14VC8	Los Angeles	2	L.A.	At Seventh St.	-----	1/11/46	Byerts & Dunn	R.C. Overcrossing	247,673	23,200	270,873
14VC9	Los Angeles	2	L.A.	Santa Ana Pkwy. over Ramp 4 of Ramona Pkwy.	-----	3/29/46	Contracting Engrs. Co.	Two Overhead Crossings	132,104	17,000	149,104
14VC10	Los Angeles	2	L.A.	At Benton Way	-----	2/ 4/46	Byerts & Dunn	R.C. Overcrossing	147,833	20,700	168,533
14VC11	Los Angeles	2	L.A.	At Fourth St.	-----	1/ 5/46	Byerts & Dunn	R.C. Overcrossing	130,299	13,500	143,799
14VC14	Los Angeles	2	L.A.	At Boyle Ave.	-----	7/25/46	Peter Kiewit Sons' Co.	R.C. Overcrossing	202,597	14,200	216,797
14VC20	Los Angeles	2	L.A.	At Silver Lake Blvd.	-----	11/14/46	Guy F. Atkinson Co.	R.C. Overcrossing	426,268	3,300	429,568
14VC22	Los Angeles	2	L.A.	At Grand Ave.	-----	12/ 9/46	Oberg Bros.	R.C. Crossing	238,210	19,000	257,210
14VC24	Los Angeles	2	L.A.	At Olympic Pkwy.	-----	12/30/46	Haddock Co.	R.C. Undercrossing	300,347	20,000	320,347
14VC25	Los Angeles	2	L.A.	At Lorena St.	-----	12/11/46	W. J. Distel	R.C. Box Girder Overcrossing	140,437	14,300	154,737
14VC26	Los Angeles	2	L.A.	At Esperanza St. & Indiana St.	-----	12/31/46	Haddock Co.	Overcrossing & Undercrossing	239,673	1,800	241,473
7VC28	Los Angeles	2	L.A.	Kearney to Soto Sts.	-----	2/ 4/47	Jannoch Nurseries	Landscape	56,118	8,000	64,118
14VC30	Los Angeles	2	L.A.	At Euclid Ave. & Marietta St.	-----	4/29/47	Spencer Webb Co.	2 R.C. Box Girder Undercross.	181,109	20,000	201,109
14VC28	Los Angeles	2	L.A.	Soto St. Underpass	-----	3/ 6/47	Oberg Bros.	R.C. Underpass	125,500	13,600	139,100
7VC37	Los Angeles	2	L.A.	Aliso—Kearney Sts.	-----	5/13/47	Vido Kovacevich	Grade P.C.C. & A.C.	185,380	23,600	208,980
7VC44	Los Angeles	2	L.A.	Aliso St. to Kearney St.	-----	7/11/47	Jannoch Nurseries	Landscape	9,625	1,500	11,125
7VC47	Los Angeles	2, 168	D, C	Various Locations	-----	10/24/47	Econolite Corp.	Traffic Sig. & Lighting	58,363	3,500	61,863
7VC31	Los Angeles	4	G	Palomas Cr.—Violin Saddle	2.6	3/10/47	Clyde W. Wood Inc.	Grade & P.M.S.	799,849	85,500	885,349
7V45	Los Angeles	4	Brb	Magnolia Ave. to Providence Ave.	-----	7/10/46	Day Labor	Traffic Signal	13,675		13,675
7AVC2	Los Angeles	4	Brb	Bet. Burbank Blvd. & Orange Grove Ave.	0.5	10/30/45	Jesse S. Smith	Grading & A.C. Paving	89,179	13,950	103,129
14VC33	Los Angeles	9	G	Across San Gabriel River near Azusa	-----	6/26/47	Bonadiman-McCain Inc.	Reconstruct Bridge	45,155	4,500	49,655
7VC34	Los Angeles	9	H	Bet. Citrus Ave. & Grand Ave.	-----	4/29/47	Griffith Company	Surfacing	7,873	646	8,519
7XC22	Los Angeles	19	B, Pom	Bet. Rte. 77 & Pomona	0.7	10/17/46	Match Bros.	Grade & Widen with P.C.C.	72,373	9,414	81,787
7VC41	Los Angeles	19, 26	Pom	Hamilton Blvd.—Reservoir St.	-----	6/30/47	Prescott Elec. & Mfg. Co.	Signals	49,127	4,869	53,944
7VC26	Los Angeles	23	E, F	About 0.5 Mi. N. of Palmdale	0.8	12/30/46	A. A. Edmondson	Grade & Surface	60,829	280	61,109
7XC36	Los Angeles	26	A, B, EMe	San Gabriel Blvd.—Mt. View Rd.	-----	6/ 6/47	C. D. Draucker Co.	Signals	55,781	5,600	61,381
7XC38	Los Angeles	26, 77	C, B	At Holt Ave. & Bellevue Ave.	0.5	6/24/47	Griffith Company	Widen & Surface	74,341	7,400	81,741
7VC37	Los Angeles	26, 77	C, B	At Holt Ave. & Bellevue Ave.	-----	6/24/47	Econolite Corp.	Signals & Lighting	30,941	3,000	33,941

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7XC16	Los Angeles----	26	L. A.	Bet. Macy St. & Indiana St.	1.9	4/26/46	Alcorn Fence Co.	Fence.	\$26,927	\$1,843	\$28,773
7XMC4	Los Angeles----	26	Mon, P, A	Various Locations		12/11/46	C. D. Draucker Co.	Traffic Signal.	43,897	675	44,482
14VC45	Los Angeles----	59	H	At Big Rock Wash.		1/23/48	Troy Const. Inc.	2 R. C. Bridges.	38,941	4,500	43,441
7VC23	Los Angeles----	60	A	Latigo Canyon to Malibu Cr.	4.5	10/14/46	Peter Kiewit Sons' Co.	Grade & Pave.	1,655,747	150,500	1,706,247
7V41	Los Angeles----	60	E. Seg., Man B	In El Segundo at El Segundo Blvd. & in Manhattan Beach at Rosecrans Blvd.		5/20/46	Day Labor.	Widen & Channelize	3,768	128	3,896
7VMC11	Los Angeles----	60	Rto B, Hm B	Redondo & Hermosa Beach		3/ 7/47	C. D. Draucker Co.	Signals	47,155	2,537	49,692
7VC22	Los Angeles----	60, 166	E Seg., Man B, A	At Intersections of Rte. 60 with El Segundo Blvd. & Rosecrans Ave. & at Intersection of Rte. 166 with Wash- ington Blvd.		7/19/46	Econolite Corp.	Traffic Signal Systems.	24,705	1,796	26,501
7VMC9	Los Angeles----	60, 175	Man B, Hm B	At Center St. & Gould Lane		2/17/47	Econolite Corp.	Traffic Signals	24,818	1,096	25,914
7XMC2	Los Angeles----	77	Alh, SGB	Various Locations		11/12/46	C. D. Draucker Co.	Signal System	54,911	2,314	57,225
0-7VC66	Los Angeles----	79	B	Bet. Saugus & Rte. 4	2.3	4/ 1/48	Smith-Edmondson Co.	Grade & P. M. S.	28,856	5,000	33,856
7XC2	Los Angeles----	161 168	A, C	Colorado St. At Rossmead Blvd.		7/30/46	Day Labor.	Widen Pav't & Const. Div. Strip.	6,189	509	6,698
7XC25	Los Angeles----	161, 168, 9, 62	A, C, Azu	At Various Locations		11/26/46	Econolite Corporation.	Signal System Illumination.	36,080	3,870	39,950
7VC40	Los Angeles----	161, 9	Ada Mnro, G	In the Cities of Arcadia & Monrovia.		6/30/47	Elect. & Mach. Service, Inc.	Signals	39,020	200	39,220
7XC33	Los Angeles----	162	A	Doheny Dr.—La Brea Ave.		5/9 /47	C. D. Draucker Co.	Signals	67,742	6,375	74,117

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7YC46	Los Angeles	165, 167, 174	A, A Sct	Figueroa St. & Carson St. Atlantic Ave. & Rosecrans Ave. & Firestone Blvd. & Garfield Ave.	---	10/ 2/47	Econolite Corp.	Signals	\$35,811	\$2,325	\$38,136
7XC21	Los Angeles	165	L.A.	Bet. College St. & Bernard St.	0.3	8/16/46	J. E. Haddock, Ltd.	Grading & Paving	286,824	23,721	310,545
7XC30	Los Angeles	165	L.A.	College St. to Bernard St.	0.3	3/27/47	Jannoch Nurseries	Landscaping	17,948	2,000	19,948
14XC19	Los Angeles	165	L.A.	At Sunset Blvd.	---	1/28/47	Winston Bros. Co.	R.C. Crossing	487,640	34,000	521,640
7XMC13	Los Angeles	165	L.A.	Bernard St. to Ave. 22	---	9/22/47	Hueffig & Schromm	Landscaping	17,056	2,300	19,356
7XMC12	Los Angeles	165	L.A.	Bernard St. to Ave. 22	1.3	7/23/47	J. E. Haddock, Ltd.	Grade P.M.S. & P.C.C.	264,326	21,000	285,326
7X55	Los Angeles	166	A	At Washington Blvd.	---	4/13/46	Day Labor	Widen Pavement Construct Curbs & Paint Stripes	5,471	28	5,499
7YC54	Los Angeles	167	A, Lym	At Atlantic Ave.	---	1/21/48	C. D. Draucker Co.	Signals	12,608	750	13,358
7XMC8	Los Angeles	167	Lym Sct	In the Cities of Lynwood & South Gate.	---	6/26/47	Econolite Corp.	Signals	30,721	1,069	31,790
7XC28	Los Angeles	167	Var.	Various Locations	---	1/22/47	R. E. Ziebarth	Signal Systems	52,500	1,850	54,350
7XC35	Los Angeles	168	A	On Lakewood Blvd., Bet. Spring St. & Conant St.	0.7	5/20/47	Jesse S. Smith	Reconstruct & Surface Shldrs.	29,625	3,350	32,975
7YC20	L.A., Ora.	168, 60	B, Sl. B.	At Intersections of Rosemead & Washington Bvlds. Coast Hwy. with Main St. & with Bay Blvd.	---	6/24/46	Econolite Corp.	Traffic Signals	22,587	1,338	23,925
7XC15	Los Angeles	168	C	Rosemead Blvd. Bet. Huntington Dr. & Colorado St.	1.1	3/28/46	Griffith Company	Grading & A.C. Paving	122,380	14,987	137,367
7XC32	Los Angeles	168	C	Rosemead Blvd. at Broadway	---	5/ 1/47	Prescott Elec. & Mfg. Co.	Signal System	8,939	1,000	9,939
O-7YC70	Los Angeles	170	A	Norwalk Blvd. to Orangefhorpe Ave.	1.9	4/ 1/48	Sully-Miller Contr. Co.	Plant Mixed Surfacing	32,032	5,000	37,032
7X64	Los Angeles	170	A, B	At Firestone Blvd. & San Antonio Dr.	---	8/ 9/46	Day Labor	Widen Pav't & Channelize	10,130	885	10,965
7XC20	Los Angeles	170	A	Bet. Sixth St. & 0.4 Mi. N. of Imperial Hwy.	1.0	7/26/46	Cox Bros. Const. Co.	Repair with P.M.S. & Widen Shldrs.	16,741	1,648	18,389
7XC23	Los Angeles	170	A	Bet. Sproul St. & Anaheim-Telegraph Rd.	1.5	10/ 9/46	Griffith Company	Surfacing	22,686	2,731	25,417
7XC29	Los Angele	174	B	Firestone Blvd., Bet. Hooper Ave. & Santa Fe Ave.	---	1/31/47	Prescott Elec. & Mfg. Co.	Traffic Signal Systems	30,664	2,560	33,224
7XC31	L.A., Ora.	174	B, A	On Firestone Blvd., Bet. Pioneer Blvd. & Lincoln Ave.	5.9	4/ 4/47	Jesse S. Smith	Resurface with P.M.S.	84,124	7,000	91,124

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7X94	Los Angeles	178	A	Bet. Charlemagne Ave. & Bellflower Blvd.	---	6/28/47	Day Labor	Storm Drain	\$6,000	---	\$6,000
14ASC4	Los Angeles	Access	L.A.	At Nicholson Ave.	---	6/ 3/46	Oberg Bros.	Overhead Crossing	267,405	\$39,865	307,270
7ASC14	Los Angeles	Access	L.A., LBeh	Term. Is. Freeway Bet. Henry Ford Ave. & Willow St.	2.1	4/18/46	Macco Const. Co.	Grade & Pave with A.C.	1,115,306	3,000	1,118,306
14ASC2	Los Angeles	Access	L.A.	Union Pacific R.R. Overhead	---	4/18/46	Macco Const. Co.	Overhead Str. Steel	555,129	34,885	620,014
14ASC3	Los Angeles	Access	L.A.	Over tracks of U.P., S.P. & P.E. at Anaheim.	---	4/18/46	E. W. Elliot Const. Co.	Struct. Steel Overhead Cross.	852,809	47,016	899,825
7XC26	L.A., Ora	Various	Various	Various Locations	---	12/ 2/46	Econolite Corp.	Signal Systems	44,446	4,095	48,541
7VC52	L.A., Ora	Various	Various	Various Locations	---	12/18/47	Tri-Cities Elec. Serv.	Signal & Lights	29,674	3,000	32,674
---	Los Angeles	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	60,445	196	60,641
6T4	Madera	4	B, C	Bet. 7.8 Mi. N. of Madera & Merced Co. Line	---	4/19/46	Day Labor	Restoring Oiled Borders	10,767	212	10,979
14DC16	Mad. Fre.	FAS	---	See Fresno County	---	---	---	---	---	---	---
14DC11	Madera	FAS 811 FAS 962	---	Across Fine Gold Cr.	0.2	4/23/47	Dan Caputo	Steel Bridge & Approaches	74,573	9,000	83,573
4TC4	Marin	1	A	At Ignacio Wye	---	6/ 5/46	Day Labor	Traffic Signals	8,265	488	8,753
4TC5	Marin	1	A	At Grant Ave., in Novato	---	1/22/47	Day Labor	Install Signals & Lights	7,280	376	7,656
4TC21	Mtn. Sor.	1	A, C	See Sonoma County	---	---	---	---	---	---	---
4TC33	Marin	1	C	Bet. San Rafael & Waldo	2.1	4/16/47	Lee J. Immel	Surfacing	70,779	5,000	75,779
4TC27	Marin	1	D, C, A	Bet. Waldo & Ignacio	1.5	6/28/46	Brown-Ely Co.	Repair with A.C. & Const. Shldrs.	64,196	4,876	69,072
4T29	Marin	1	Srf, C	Bet. Sta. 97+90± & Sta. 42+50±	---	12/26/45	Day Labor	Guard Rail	5,034	8	5,042
14TC18	Marin	1, Fdr	* Srf	At Linden Lane	---	2/13/47	Parish Bros. & Lew Jones Const. Co.	Grade Separations & Approaches	246,404	23,500	269,904
14TC12	Marin	8	A	Across Novato Cr. about 9 Mi. N. of San Rafael	---	7/17/46	William B. Willett Co.	Repair Bridge	5,752	516	6,268
---	Marin	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	15,948	---	15,948
14DC26	Mariposa	FAS 966, 967, 963	---	17 Mi. W. of Mariposa to 12 Mi. E. of Mariposa	---	9/18/47	E. H. Peterson & Son	Constructing 6 Bridges	88,600	9,400	98,000

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
	Mariposa			Various Locations				Minor Contracts & D.L. Projects	\$6,574		\$6,574
1TC15	Mendocino	1	B	Bet. Burke Hill & 1 Mi. N.	1.0	6/21/46	C. M. Syar	Repair with Imp. Base Matl. & P.M.S.	38,385	\$4,128	42,513
1TC19	Mendocino	1	B	Bet. Hopland & Crawford Ranch	6.6	4/ 8/47	Clements & Co.	Plant Mix. Surf. & Seal Coat.	159,023	14,000	173,023
1TC16	Mendocino	1	E	Bet. N.W.P.R.R. Grade Crossing & N.W. P.R.R. Underpass	0.8	10/14/46	A. R. McEwen & C. M. Syar	Grade & Surface	145,737	24,900	170,637
1TC10	Mendocino	1	E	Bet. N.W.P.R.R. Underpass & 1.1 Mi. S. of Willits	2.0	6/ 9/45	A. R. McEwen	Repair with Imp. Base & P.M. Bit. Matl.	30,009	6,265	36,274
1TC14	Mendocino	1	E	Bet. Willits & 2.6 Mi. Northerly	2.6	5/10/46	C. M. Syar	Plant Mixed Surfacing	74,473	8,303	82,776
14TC27	Mendocino	1	K	At Red Mountain Cr. & McCoy Cr.		9/30/47	James H. McFarland	Repairing 2 Bridges	30,018	2,700	32,718
1738	Mendocino	1	K	At Red Mountain Cr.		5/ 9/47	Day Labor	Bridge Repairs	11,904		11,904
14TLC9	Mendocino	16	A	At Dooley Cr. 1 Mi. E. of Hopland		4/22/46	F. Fredenburg	R.C. Bridge & Approaches	41,367	4,547	45,914
1WLC5	Mendocino	48	A	At Red Bank Cr. & Lost Cr.	0.4	9/16/46	C. M. Syar	Grade & Imp. Base Matl.	31,206	5,535	36,741
1W24	Mendocino	48	B	At Anderson Cr. Br. No. 10-64		5/10/46	Day Labor	Repair Bridge	7,981	7	7,988
1WLC4	Mendocino	56	A	At Slick Rock Cr.	1.0	5/16/46	Piombo Bros. & Co.	Grade & Imp. Base Matl.	118,880	20,000	138,880
1WLC3	Mendocino	56	B	At Alder Cr. about 7 Mi. N. of Point Arena	1.2	9/24/45	Guerin Bros.	Grading, Surfacing & Bridge	198,762	30,140	228,902
14WLC38	Mendocino	56	E	Bet. Bromley Cr. & Fort Bragg	3.8	10/25/46	Guy F. Atkinson Co.	2 Bridges, Grade, & P.M.S.	943,506	73,000	1,016,506
1WC8	Mendocino	56	D	Bet. Navarro River & Mendocino	1.9	6/26/45	W. C. Railing	Repair with Imp. Base Matl. & Seal Coat	29,789	2,213	32,002
1WLC1	Mendocino	56	F	At Chadburn Cr., about 13.4 Mi. N. of Fort Bragg	0.2	7/ 6/45	John Burman & Sons	Grading, Culvert & Surfacing	19,313	3,476	22,789
1WLC2	Mendocino	56	F	At Blue Slide Gulch	0.2	8/28/45	John Burman & Sons	Grading, Surfacing & Bridge	70,324	11,516	81,840
1DC3	Mendocino	FAS 505		On Longvale-Covelo Rd., Bet. 1.5 Mi. & 5.4 Mi. Easterly of Dos Rios	2.9	3/26/47	N. M. Ball Sons	Grading	179,629	18,000	197,629
14DC30	Mendocino	FAS 979		At Morrison Cr. S. of Ukiah		11/ 5/47	Kenneth Whited	Reinforced Concrete Bridge	13,544	650	14,194
10T25	Merced	4	A	0.4 Mi. S. of Merced		4/24/46	Day Labor	Improve Intersection	6,344	483	6,827

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
10TC11	Merced	4	C	Black Rascal Canal to Buhach Sta.	3.8	4/9/46	Gunner Corp.	Grade, Pave & Bridge	\$412,646	\$64,200	\$476,846
10TC19	Mer Sta.	4, 110	D, C	Bet. 3 Mi. N. of Livingston & Stanislaus County Line & Bet. Modesto & Empire	8.9	5/16/47	M. J. Ruddy & Son	Plant Mixed Surfacing	63,182	6,500	69,682
10TC13	Merced	4	Atw, C	Bet. Atwater & 2 Mi. N.	3.2	5/27/47	Gunner Corp.	Repair with P.M.S.	64,642	5,336	69,978
10TC17	Merced	18	A	Bet. Planada & 5.3 Mi. E.	5.3	4/22/47	M. J. Ruddy & Son	Plant Mixed Surfacing	84,539	9,000	93,539
10W33	Merced	32	B	At Sta. 344+08	---	4/25/46	Day Labor	Widen Culvert	927	21	948
10WC12	Merced	32	C	Bet. San Joaquin Riv. & Madera Co. Line	3.0	6/21/46	Frank B. Marks & Sons	Repair with Untr. Rk Base & P.M.S.	84,316	5,515	89,831
14WLC34	Merced	122	A	Across Mud Slough & Garzas Cr.	---	6/25/46	Dan Caputo	Bridge & Culvert	48,486	7,166	55,652
2WC2	Mod. Las.	28, 73 210	Various	See Lassen County	---	---	---	---	---	---	---
2W16	Modoc	73	A, B	Bet. Rte. 28 & Oregon State Line	16.2	3/13/46	Day Labor	Grade & Pave	510,000	25,635	535,635
14WLC57	Modoc	73	C	Across S. Fork of Pit Riv. at Likely	---	6/26/47	T. A. Kvale	Reinforced Concrete Bridge	32,052	7,000	39,052
2DC2	Modoc	FAS 513	B, C, D	Bet. Eagleville & 4 Mi. N. of Lake City	29.5	5/23/46	E. B. Bishop & D. Gerald Bing	Grading & Plant Mixed Surf.	410,111	43,197	453,308
---	Modoc	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	9,024	159	9,183
9X7	Mono.	13	A	Bet. Mi. 10.0 & Mi. 12.8	2.8	3/20/47	Day Labor	Widen & Resurface	5,353	---	5,353
9V14	Mono.	23	A	At Rock Cr.	---	5/1/47	Day Labor	Culvert & Approaches	5,288	---	5,288
9V11	Mono.	23	A, B	Bet. Mi. 1.00 "A" & Mi. 3.65 "B"	8.4	3/13/47	Day Labor	Bituminous Surfacing	24,942	---	24,942
9VC7	Mono.	23	I	Bet. Point Ranch & Bridgeport	2.8	5/1/47	Geo. E. France	Repair & Plant Mixed Surfacing	40,322	5,000	45,322
9X8	Mono.	40	B	Bet. Mi. 0.0 & Mi. 3.4	3.4	3/20/47	Day Labor	Widen & Resurface	13,249	---	13,249
9XC3	Mono.	40	C	Bet. Rte. 23 & Sheep Corral	6.3	6/28/46	Geo. E. France	Road Mix Surfacing	21,496	2,888	24,384
9DC2	Mono.	FAS 1093	---	Near Bridgeport on Twin Lakes Rd.	3.9	6/30/47	Dix-Syl Const. Co., Inc.	Grade & Bituminous Surfacing	45,428	8,500	53,928

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
9DC3	Mono.	FAS 1094		Near Coleville	3.4	8/29/47	Nevada Constructors Inc.	Grade, Pen. Treat., & Tim. Br.	\$53,291	\$9,000	\$62,291
	Mono.			Various Locations				Minor Contracts & D.L. Projects	800		800
5TC5 5WC4	Monterey	2, 118, 56	B B, A, J	Bet. 2 Mi. S. of Salinas & Salinas	1.9	3/19/46	Granite Construction Co.	Grading & A.C. Paving	208,926	27,880	236,806
				Bet. Chualar & 3 Mi. N.; Bet. Salinas & Castroville & Bet. Werner Hill & Watsonville Jct.	3.7	5/ 1/47	Granite Const. Co.	Plant Mixed Surfacing	23,050	2,900	25,950
5TC4	Monterey	2	J	Bet. Santa Rita & 0.8 Mi. N. of Crazy Horse Summit	8.4	1/14/46	A. Teichert & Son, Inc.	Grading & Plant Mixed Surfacing	745,257	66,643	811,900
5TC7	Mon, SBt	2	J, B	Bet. 0.8 Mi. N. of Crazy Horse Summit & Chittenden Rd.	6.7	10/16/46	A. Teichert & Son, Inc.	Grading & Surfacing	740,056	92,000	832,056
5WC3	Monterey	117, 56	A, I	Bet. Del Monte Jct & Seaside Jct.	3.0	6/28/46	N. M. Ball Sons	Grading & Paving	470,407	59,000	529,407
5W14	Monterey	56	F	At Sta. 395+46		4/15/48	Day Labor	Replace Bridge	5,700		5,700
	Monterey			Various Locations				Minor Contracts & D.L. Projects	12,127	15	12,142
4W27	Napa	6	A	Bet. Mi. 2.7 & Mi. 3.6	0.9	4/22/46	Day Labor	Construct Base & Resurface	9,973		9,973
14TC15	Napa	7	A	At Farm Rd. Undercrossing 4 Mi. N. of Vallejo		8/ 9/46	Minton & Kubon	Reconstruct Undercrossing	11,952	942	12,894
1WLC6	Nap, Lak	49	A, A	Bet. 0.1 Mi. Northerly & 1.5 Mi. Northerly of Napa-Lake County Line	0.8	3/24/47	Pionbo Const. Co.	Grade, Surface, & 2 Bridges	212,385	21,000	233,385
	Napa			Various Locations				Minor Contracts & D.L. Projects	836		836
3TC38	Nevada	25	NevC, A	Bet. E. Broad St. in Nevada City & 2 Mi. Northwesterly	1.9	6/26/47	J. Henry Harris	Surfacing	52,888	6,000	58,888
3WC9	Nev, Pla	38	A, B, C	See Placer County				Minor Contracts & D.L. Projects	3,000		3,000
	Nevada			Various Locations				Grade & Pave	112,100	12,300	124,400
7VC27	Orange	2	A	Bet. 1 Mi. N. of Doheny Park & San Juan Cr.	0.9	1/ 2/47	Cox Bros. Const. Co.	Repair Shldrs.	15,658	2,100	17,758
7VC42	Orange	2	A, B	Bet. 1 Mi. S. of Galivan & 1.4 Mi. N. of El Toro Rd.	3.4	6/30/47	Jesse S. Smith				

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7VC33	Orange	2	B	Near Irvine about 6 Mi. S. of Tustin		3/26/47	Catalina Const. Co.	Two Culverts	\$58,557	\$7,000	\$65,557
7VC45	Orange	2	B	Bet. El Toro & Irvine	2.2	8/22/47	O'Brien & Bell Const. Co.	U.T. Rock Base & P.M.S.	60,008	6,200	66,208
7VC19	Orange	2	B, C	Bet. 1.4 Mi. N. of El Toro Rd. & S. City Limits of Tustin	8.3	6/20/46	John J. Swigart Co.	Repair with P.M.S. & Widen Shldr.	96,730	7,634	104,364
11VC5	Ora, SD	2	SCle, D	See San Diego County							
7VC17	Orange	2	SCle	At Rte. 2 & Avenida Del Mar		3/ 1/46	C D Draucker Co.	Install Signals	5,570	726	6,296
7VC48	Orange	2	SCle	Bet. San Diego Co. Line & Valencia St. in San Clemente	1.8	11/ 3/47	O'Brien & Bell Const. Co.	Grade & Surface	93,369	10,000	103,369
11VC16	Ora, SD	2	SCle, Oen, C, D	See San Diego County							
7VC67	Orange	60	A	Bet. Los Patos Ave. & 1.3 Mi. Southerly	1.3	4/ 1/48	O'Brien & Bell Const. Co.	Grade & Plant Mixed Surfacing	64,432	9,500	73,932
14VC17	Orange	60	B	Across North Arm of Newport Bay		9/13/46	Case Construction Co.	Repair Bridge	35,880	3,746	39,626
14VC13	Orange	60	C	Bet. Dana Point & Doheny Park	0.4	5/29/46	C. B. Tuttle & Schmidt Bros. Contractors	Widen & Surface with P.M.S. & Widen 2 Bridges	206,469	21,000	227,469
7VC43	Orange	60	LgnB	In Laguna Beach on Coast Blvd., Bet. Diamond St. & Myrtle St.		6/30/47	Tri-Cities Elec. Service	Traffic Signals	22,847	3,800	26,647
7VC29	Orange	60	LgnB, C	Bet. Laguna Beach & Dana Point	4.9	1/30/47	Cox Bros. Const. Co.	Grade & Surface	240,349	27,000	267,349
7VC18	Orange	60	SIB, A	Bet. Los Patos Ave. in Sunset Beach & Second St. in Seal Beach	2.3	4/30/46	Griffith Company	Widen Shldr. & Resurface	44,921	4,005	48,926
7VC20	Ora, LA	60, 168	SIB, B	See Los Angeles County							
7X59	Orange	174, 171	A, B	At Intersection of Grand Ave. & Manchester Ave.		6/28/46	Day Labor	Widen Pav't & Channelize	9,864	1,132	10,996
7XC31	Ora, LA	174	A, B	See Los Angeles County							
7X85	Orange	175	B	Bet. Rte. 2 & Rte. 43	4.5	3/31/47	Day Labor	Repair Shldr.	5,952		5,952
14VLC4	Orange	176	A	Across Coyote Cr. W. of Brea		11/ 3/47	O. B. Pierson	Reinforced Concrete Bridge	26,094	6,000	32,094
7XC17	Orange	183	A	Bet. Verano St. & W. City Limits of Santa Ana	1.8	6/ 7/46	John J. Swigart Co.	Resurface with P.M.S. & Widen Shldr.	26,608	3,447	30,055

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7YC52 7XC26	Ora, LA. Ora, LA.	Var Var	-----	See Los Angeles County See Los Angeles County							
7DC2	Orange	FAS 742	-----	On Harbor Blvd., Bet. Wilson St. in Costa Mesa & Manchester Ave. S. of Anaheim	11.2	12/31/46	Griffith Company	Widen & Surface	\$239,563	\$24,000	\$263,563
-----	Orange	-----	-----	Various Locations					29,664	-----	29,664
3T51	Placer	3	A	Bet. 1.9 Mi. N. of Roseville & 1.0 Mi. S. of Lincoln	5.1	8/22/46	Day Labor	Construct Borders	17,742	1,900	19,642
3TC32	Placer	17	Aub, C	Bet. Rte. 37 in Auburn & Wise Canal	1.7	9/16/46	Frederickson & Watson Const. Co.	Grade & Surface	185,786	18,000	203,786
3TMC14	Placer	17	Rsv	Bet. Jefferson St. & E. City Limits of Roseville				Plant Mixed Surfacing	7,121	1,000	8,121
3TC27	Placer	17, 37	B, Aub, A	Bet. 0.1 Mi. W. of Nevada St. & 1 Mi. E. of Auburn	0.9	4/22/48	J. R. Reeves				
-----	-----	-----	-----	-----	2.6	6/24/46	Frederickson & Watson Const. Co.	Grade & Surf. with P.C.C. & P.M.S.	631,309	52,000	683,309
14TC6	Placer	37	Aub	Over Tracks of S.P.R.R. in Auburn		1/ 8/46	H. W. Ruby	Steel Beam Overcrossing	90,350	8,100	98,450
14TC4	Placer	37	Aub	East St. Undercrossing in Auburn		1/ 5/46	H. W. Ruby	Steel Beam Undercrossing	59,712	1,650	61,362
14TC7	Placer	37	Aub	Walsh St. Undercrossing		1/ 3/46	Wm. E. Thomas Const. Co.	R.C. Undercrossing	30,584	4,436	35,020
3WC9	Pla, Nev.	38	BC, A	Bet. 4.7 Mi. W. of Tahoe City & Nevada County Line	8.5	6/28/46	Clements & Co.	Repair with P.M.S. & Seal Coat	133,935	12,132	146,067
-----	Placer	-----	-----	Various Locations				Minor Contracts & D.L. Projects	735	-----	735
14TC14	Plumas	29	A	Acrea North Fork of Feather River at Chesnut		8/ 9/46	C. C. Gildersleeve	Sidewalks on Bridge	6,288	179	6,467
2TC20	Plu, Las.	29	A, A	Bet. 0.3 Mi. W. & 0.8 Mi. E. of Plumas- Lassen County Line	1.1	4/21/47	Frederickson & Watson Const. Co.	Grade & Surface	88,616	10,250	98,866
2DC4	Plumas	FAS 523	-----	Bet. Rte. 83 near Almanor & Plu-Las. County Line, 2 Mi. W. of Westwood	9.9	8/ 7/46	Frederickson & Watson Const. Co.	Grade & Surface	386,276	37,053	423,329
-----	Plumas	-----	-----	Various Locations				Minor Contracts & D.L. Projects	3,719	5	3,724

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
8VC6	Riverside	19	A	Bet. Mira Loma & 2.5 Mi. W. of Riverside	5.9	12/14/45	Geo. Herz & Co.	Grading & Plant Mixed Surfacing	\$686,302	\$40,183	\$726,485
8VC11	Riverside	19	A	Bet. Mira Loma & 2.5 Mi. W. of Riverside	5.9	3/20/47	George Herz & Co.	Seal Coat	11,722	1,300	13,032
8VC10	Riv. Sbd.	19	A, B	See San Bernardino County							
8VC12	Riv. Sbd.	43, 9	A, A, A	See San Bernardino County							
8VC9	Riverside	26	Ban, B	Bet. Midway & E. City Limits of Banning	3.1	6/25/46	Herz Paving Co.	Repair with P.M.S. & Grade Shldrs.	52,245	2,755	55,000
11VC18	Riverside	64	C, D	Bet. 6 Mi. E. of Desert Center & Hopkins Well	10.4	4/30/47	Arthur A. Johnson	Road Mix Surfacing & Seal Coat	57,207	5,633	62,840
11XC15	Riverside	64 146	E ABCDE	Bet. 1.9 Mi. W. of Pallowalla & 3.9 Mi. W. of Blythe & Bet. 3.6 Mi. N. of Imp. Co. Line & 1.8 Mi. S. of S. Bd. Co. Line	12.3	4/11/47	MacArthur & Son	Repair with R.M.S.	50,319	3,021	53,340
14VC21	Riverside	64	H	Across Coachella Canal 5 Mi. E. of Indio		11/14/46	F. Fredenburg	R.C. Slab Bridge	37,483	3,429	40,912
14VC19	Riverside	64	H, B	Near Indio		9/13/46	E. G. Perham	Repair 5 Bridges	37,195	3,714	40,909
11XC30	Riv. S.D.	77	F, F, G	See San Diego County							
11XC13	Riverside	146	ABCDE	Bet. 1.3 Mi. N. of Imp. Co. Line & 0.5 Mi. S. of S. Bd. Co. Line	15.4	8/21/46	Arthur A. Johnson	Repair with Imp. Base Matl. & R.M.S.	54,272	5,629	59,901
8XC13	Riverside	187	C	Near Cathedral City		8/29/47	R. P. Shea Company	Construct Dips	6,741	1,500	8,241
8X5	Riverside	194	A	Bet. Sage & Jct. of Rte. 78		5/20/46	Day Labor	Grading, Surfacing & Culverts	14,472		14,472
8DC5	Riv. Sbd.	FAS 695		On Archibald Ave., Bet. Cloverdale Ave. & Valley Blvd.	6.0	9/4/47	Peter Kiewit Sons' Co.	Grade, IB & P.M.S.	191,254	20,055	211,309
8DC3	Riverside	FAS		On Jurupa Ave., Bet. Mira Loma & Sunny-slope	5.3	7/8/47	Peter Kiewit Sons' Co.	Grade & P.M.S.	111,887	11,230	123,117
8DC1	Riverside	FAS 706		On "B" St. & Crestmore Rd.	2.9	3/12/47	E. L. Yeager	Grade & Surface	117,051	11,200	128,251
14DC29	Riverside	FAS 720		At Santa Gertrudis Cr.	0.35	10/9/47	Foster & McHarg	Reinforced Concrete Bridge	37,337	1,680	39,017

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
5TC9	San Benito	22	C	Bet. Rte. 2 & San Juan Bautista	2.2	6/26/47	A. Teichert & Son, Inc.	Repair with Imp. Bor. & Bit. Surf.	\$35,595	\$4,000	\$39,595
5WL18	San Benito	119	C	At Ranch Cr.		2/14/47	Day Labor	Replace Timber Cattlepass	5,000		5,000
5W10	San Benito	119	C	At Late Cr.		3/27/47	Day Labor	Replace Bridge	5,778		5,778
5DW1	San Benito	119	E	Bet. 2.5 Mi. S. of Hollister & Hollister	2.6	4/ 4/47	A. Teichert & Son, Inc.	Grade & Plant Mixed Surfacing	137,220	17,500	154,720
	San Benito			Various Locations				Minor Contracts & D.L. Projects	4,120		4,120
14VC31	San Bernardino	9, 190	A, A	Across Day Canyon Flood Channel about 5 & 7 Mi. E. of Upland		5/16/47	George W. Peterson	Two Bridges	73,904	9,500	83,464
8VC12	SBd, Riv.	9, 19 43	A, A, A	Bet. E. City Limits of Upland & 0.6 Mi. E. of Haven Ave., Bet. 2.4 Mi. & 0.3 Mi. W. of Riverside & Bet. Panorama Point & Squirrel Inn							
8VC10	SBd, Riv.	19	B, A	Bet. 0.5 Mi. E. of Ontario & Mira Loma	10.7	5/ 5/47	Matich Bros.	Plant Mixed Surfacing & Seal Coat	111,210	5,500	116,710
14VC12	San Bernardino	26	A	Across Mission Storm Drain	5.8	9/23/46	Peter Kiewit Sons' Co.	Grade & Surface	429,996	60,400	490,396
8XC12	San Bernardino	26	D	Bet. Etiwanda Ave. & Mulberry Ave.	0.9	6/ 4/47	George Herz & Co.	Widen Bridge	11,391	2,831	14,222
8VC21	San Bernardino	26	D	2.7 Mi. W. of Colton	0.1	4/22/48	R. A. Drwin	Grade, Pave. & Structures	417,264	41,500	458,864
8XC6	San Bernardino	26	D	Bet. Vineyard Ave. & Etiwanda Ave.	5.7	3/29/46	Matich Bros.	P.M.S. & P.C.C.	5,218	1,400	6,618
8XC5	San Bernardino	26	D, Ria	Bet. Mulberry St. & Colton	9.8	12/28/45	Griffith Company	Grading, P.C.C. Paving & Bridges	497,945	41,483	539,428
								Grading, P.C.C. Paving & Overcrossing	1,452,014	69,764	1,521,778
8XMC1	San Bernardino	26	Ont.	On "A" St.		6/19/47	Paul Gardner	Traffic Signals	24,049	645	24,694
8VC7	San Bernardino	26	Rdl.	Bet. State St. & E. City Limits	2.8	12/21/45	Matich Bros.	Grading & P.C.C. Paving	317,522	22,126	339,648
8VC8	San Bernardino	31	D	Bet. Victorville & Ora Grande Underpass	4.7	6/11/46	Geo. Herz & Co.	Repair with P.M.S.	41,131	2,673	43,804
8V8	San Bernardino	31	J	Bet. Field & Summit		7/ 6/46	Day Labor	Experimental Blanket	6,951		6,951
8XC9	San Bernardino	43	A	Bet. 8.6 Mi. & 11.7 Mi. N. of San Bernardino	0.4	10/ 4/46	Geo. Herz & Co.	Widen & Surface with P.M.S.	48,831	2,662	51,493
8XC8	San Bernardino	43	B, C	Bet. Squirrel Inn & Big Bear Dam	13.8	6/28/46	R. R. Hensler	Road Mixed Surfacing & Seal Coat	102,008	14,300	116,308
8XC10	San Bernardino	43	L	Bet. 1 Mi. E. of Victorville & Victorville	1.4	3/ 6/47	Matich Bros.	Grade & Surface	101,329	10,000	111,329

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
8VLC1	San Bernardino	58	P	Bet. 11 Mi. E. of Needles & Red Rock Bridge	2.9	3/13/47	Arthur A. Johnson	Grade & Surface	\$59,612	\$4,901	\$64,513
14XLC7	San Bernardino	190	D	At Mill Cr.		6/21/46	Bent Construction	Bridge & Approaches	97,666	11,107	108,773
8XC7	San Bernardino	207	A	Bet. Highland Ave. & City Cr. Bridge	3.2	5/16/46	Denni Investment Corp.	Grading, P.M.S., & Construct Br.	707,904	79,500	787,404
8DC5	SBD, Riv.	FAS 695		See Riverside County							
8DC4	San Bernardino	FAS 706		Bet. Riverside Ave. & Colton	2.1	8/7/47	T. M. Page	Grade & Plant Mixed Surfacing	53,897	5,800	59,697
8DC2	San Bernardino	FAS 712		On Waterman Ave., Bet. Riverside-Redlands Rd. & Mill St.	2.7	4/8/47	Griffith Company	Grade, Surface, & 2 Bridges	381,007	37,000	418,007
	San Bernardino			Various Locations				Minor Contracts & D.L. Projects	14,013		14,013
11VC12	San Diego	2	A	Bet. Ninth St. & Luneta Dr. in Del Mar	0.6	9/13/46	V. R. Dennis Const. Co.	Widen with A.C. & P.M.S. Shldrs.	21,332	3,972	25,304
11VC16	San Diego	2, 12	A, B, ECj	In Del Mar, Solana Beach, Encinitas, Carlsbad, & El Cajon		6/30/47	Tri-Cities Elect. Service	Traffic Signals & Lighting	54,431	5,000	59,431
11VC9	San Diego	2	B, C, D	Bet. Leucadia & San Mateo Cr.	6.2	5/29/46	N. M. Ball Sons	Repair with Imp. Base Matl. & P. M.S.	55,573	3,635	59,208
11VC11	San Diego	2	C	At Main Entrance to Camp Pendleton		7/22/46	Tri-Cities Elec. Service	Traffic Signal System	5,490	112	5,602
14GVC1	San Diego	2	C	Over A.T. & S.F. Ry. 1 Mi. N. of Ocean side		12/28/45	Fred D. Kyle	Steel Overcrossing	85,806	12,168	97,974
11VC5	SD, Ora.	2	D-SCle	Bet. Las Flores Cr. & San Clemente	9.5	9/20/45	N. M. Ball Sons	Grade & P.C.C. & A.C. Paving	678,642	59,617	738,259
14VC8	San Diego	2	D	Across San Mateo Cr., about 18 Mi. N. of Oceanside		8/24/45	Oberg Bros.	R.C. Girder Bridge	140,199	14,629	154,828
11X27	San Diego	2	F	At Border Airport Curve, 2.5 Mi. N. of San Ysidro		5/3/46	Day Labor	Superelevate Curve	5,195	125	5,325
11X28	San Diego	2	F	Bet. 1.5 Mi. N. of San Ysidro & 2 Mi. S. of Otay	1.0	6/11/46	Day Labor	Experimental Surfacing	14,089	655	14,744
11XC11	San Diego	2, 199, 12	F, A, B, ECj	Bet. San Ysidro & Chula Vista; Bet. Rte. 2 & Imperial Beach; & Bet. Grossmont & El Cajon	9.3	5/29/46	R. E. Hazard Contr. Co.	Repair with Imp. Base Matl. & P. M.S.	111,306	5,541	116,847

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11XC20	San Diego	2	ChV	Bet. S. City Limits & N. City Limits of Chula Vista	2.3	7/31/47	R. E. Hazard Contr. Co.	Plant Mixed Surfacing	\$50,787	\$5,600	\$56,387
11V16	SD, Ora	2	Om, C, D S.C.	Oceanside to San Clemente		3/25/46	Day Labor	Signs & Stripe	7,344	24	7,368
11VC7	San Diego	2	Om, C	Bet. San Luis Rey River & 0.2 Mi. N. of Aliso Cr.	4.9	12/ 7/45	Basich Bros. Const. Co. & Basich Bros.	Grading & P.C.C. Paving & Resurfacing Portions with A.C.	600,096	64,861	664,957
14VMC1	San Diego	2	S.D.	At Scripps Canyon Overpass near 10th St.		3/10/47	C. B. Tuttle Co.	Rodeck Overpass	43,437	3,697	47,134
11VMC11	San Diego	2	S.D.	On Pacific Hwy. at Balboa Ave.	0.12	3/ 5/48	R. E. Hazard Contr. Co.	Grade, Paye, & Channelization	19,346	2,298	21,644
11VMC7	San Diego	2	S.D.	From Teolote Cr. to Balboa Ave.	2.5	12/ 8/47	R. E. Hazard Contr. Co.	Grade, I.B., & P.M.S.	43,743	2,500	46,243
11VC17	San Diego	12	A, I, Msa, B, ECJ	Bet. San Diego & El Cajon	2.9	7/31/47	Griffith Company	Plant Mixed Surfacing	42,576	4,850	47,426
11GC3	San Diego	City St 12	S.D.	On Washington St., Normal St., & El Cajon Blvd.	1.1	9/ 8/47	Griffith Company	Grade, P.C.C., & P.M.S.	202,280	18,040	220,320
11XC30	SD, Riv	77	F, G-F	Bet. Escondido & 10 Mi. N. of San Diego Co. Line		8/30/46	Prison Labor	Grading	179,879	11,375	191,254
11XC21	San Diego	77	F, G	Bet. Escondido & 3.4 Mi. S. of Riverside Co. Line	19.6	8/22/47	Morrison-Knuelsen Co., Inc.	Plant Mixed Surfacing	209,543	15,000	224,543
14XC12	San Diego	77	G	At San Luis Rey River & Keys Canyon Cr.		4/28/46	Spencer Webb	Two Steel Girder Bridges	169,111	19,000	178,111
411X4	San Diego	77	G	Bet. 1.5 Mi. S. of Moses Cr. & San Luis Rey River		7/ 3/41	Prison Labor	Grading	950,387	65,113	1,015,500
14XC6	San Diego	77	S.D.	At Date St. Quince St. & Upas St.		12/ 5/45	M. H. Golden Const. Co.	R.C. Overcrossings	158,981	16,935	175,916
14XC7	San Diego	77	S.D.	Across San Diego River		12/13/45	Harry L. Foster	R.C. Bridge	178,002	15,377	193,379
14XC9	San Diego	77	S.D.	Over Balboa Fwy. at Richmond St.		2/20/46	M. H. Golden Const. Co.	Overhead Crossing	60,178	9,974	70,152
14XC13	San Diego	77	S.D.	At Farris Rd.		6/25/46	Fred D. Kyle	Steel Girder Overcrossing	56,117	7,772	63,889
14XC16	San Diego	77	S.D.	Over Balboa Fwy. at Paseo St.		8/ 8/46	Carroll & Foster	R.C. Overcrossing	74,606	8,784	83,390
14XC17	San Diego	77	S.D.	On Balboa Fwy. at Sixth St.		8/ 8/46	M. H. Golden Const. Co.	R.C. Overcrossing	111,633	9,263	120,896
11XC16	San Diego	77	SD, A	Bet. 4.4 Mi. S. of Mission Valley Rd., & 0.5 Mi. N. of San Diego City Limits	4.1	5/15/46	Basich Bros. Const. Co. & Basich Bros.	Grading & P.C.C. Surfacing	1,123,821	120,000	1,243,821
11XC9	San Diego	77	S.D.	Bet. "A" St. & 0.4 Mi. S. of Mission Valley Rd.	2.9	1/11/46	Mittry Bros. Const. Co. & Basich Bros. Const. Co.	Grading & P.C.C. Paving	1,390,881	159,000	1,549,881

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11XC16	San Diego	77	S.D.	Bet. "A" St. & 0.4 Mi. S. of Mission Valley Rd.	2.9	4/21/47	Jannock Nurseries	Landscaping	\$72,369	\$7,200	\$79,569
14XC15	San Diego	77	S.D.	At University Ave.		6/25/46	M. H. Golden Const. Co.	R.C. Overcrossing	131,114	12,000	143,114
14XC14	San Diego	77	S.D.	At Mission Valley Rd.		6/26/46	M. H. Golden Const. Co.	Two R.C. Overcrossings	243,800	17,700	266,500
11XC19	San Diego	77	S.D.	Bet. 11th Ave. & "A" St. in San Diego		8/1/47	Tri-Cities Elec. Service	Signals & Lighting	9,507	800	10,307
11XC14	San Diego	77	S.D.	Bet. 0.9 Mi. E. Santa Ysabel & 2.4 Mi. W. Julian	1.3	2/17/47	Clifford C. Bong & Co.	Grading & Surfacing	118,832	12,000	130,832
14XC16	San Diego	78	A	Across Samagatuma & Descanso Creeks		5/16/46	Oberg & Cook	2 Bridges	88,860	8,520	97,380
14XC10	San Diego	78	D, E	At Matagual Valley Cr., Canada Verde Cr. & Acorn Cr.		4/1/46	O'Rourke & Parker	R.C. Slab Bridges	40,214	4,699	44,913
11VC19	San Diego	78, 195	E, C	Bt. 3.1 Mi. & 3.5 Mi. N. of San Luis Rey River & Bet. Colby Ranch & Rincon Store	1.1	12/30/47	Arthur A. Johnson	Grade & Bit. Surface Treat.	41,177	4,500	45,677
14XC18	San Diego	197	B	Across Santa Ysabel Cr.		11/1/46	Spencer Webb	Bridge & Approaches	220,630	18,000	238,630
14VC41	San Diego	198	ECj	At Wright St. Cr. in El Cajon		12/11/47	Johnson-Western Co.	R.C. Culvert	14,680	2,500	17,180
14XC19	San Diego	200	B	At Dulzura Cr. about 5 Mi. S. of Jamul	0.3	4/10/47	Griffith Company	Bridge & Approaches	77,505	8,800	86,305
14XC15	San Diego	200	D	At Campo Cr. about 6 Mi. W. of Campo.		12/21/45	Walter H. Barber	Steel Bridge & Approaches	81,318	9,227	90,545
	San Diego			Various Locations				Minor Contracts & D.L. Projects	37,600	308	37,908
4T64	San Francisco	2	S.F.	Alemanly Blvd. Bet. Mission St. & Sta. 36.		5/12/47	State's Share of Cost.	Grade & Pave.	98,000		98,000
14TMC1	San Francisco	2	S.F.	Bridge Over Presidio of San Francisco		11/6/46	R. W. Reade & Co.	Clean & Paint Approach Bridge	41,615		41,615
15T3	SF-Ala	68, 5	SF-Oak	San Francisco-Oakland Bay Bridge		7/19/45	Insurance		130,410		130,410
14TC21	SJ, Sta.	4	A, B	See Stanislaus County							
10TC15	SJ, Sta.	4	A, B, Rip	See Stanislaus County							
10TC24	SJ, Sta.	4	A, B, Rip	See Stanislaus County							
10TC14	San Joaquin	4	C	Bet. Calaveras River & Lodi	8.2	6/22/46	Fredrickson & Watson Const. Co.	Grade, P.C.C. Pav't. & 3 Bridges	807,567	65,500	873,067
10TC23	San Joaquin	4	C	Bet. Calaveras River & Lodi		8/28/47	F. Kaus	Barrier Fests	25,171	4,100	29,271
10TL2	San Joaquin	4	E	At Little John Cr. & S. Br. of Little John Cr. Br. No. 29-17, 18		9/21/44	Day Labor	Bridge Repair	10,476	746	11,222
10TL4	San Joaquin	4	E	At French Camp Slough & Lone Tree Slough Overflow Brs. No. 29-19, 20		10/16/44	Day Labor	Repairs	10,400	749	11,149
10TL5	San Joaquin	4	E	At Lone Tree Slough Overflows, Br. No. 29-21, 22		11/24/44	Day Labor	Replace Abutments	10,782	743	11,525

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
10TC12	San Joaquin	5	A, Tra	Bet. Byron Rd. & Santa Rd.	5.5	5/ 6/46	M. J. Ruddy & Son	Rock Base & Plant Mixed Surfacing	\$137,462	\$11,347	\$148,809
10TC10	San Joaquin	5	B	Bet. Grant Line Rd. & Mossdale	3.8	1/22/46	M.J.B. Construction Co.	Grading & P.C.C. Paving	396,325	45,040	441,365
14TC10	San Joaquin	5	B	Across Paradise Cut & Paradise Cut		1/28/46	Stockton Const. Co.	Steel Bridge & R.C. Bridge	114,333	13,563	127,896
14TC17	San Joaquin	5	B	Overflow		11/22/46	Lord & Bishop	Bridge Substructure	257,449	16,000	273,449
10TMC2	San Joaquin	5	Tra	Across San Joaquin River at Mossdale							
				On 11th St., Bet. N. "B" St. & Central Ave.		10/ 2/47	Charles I. Cunningham	Paving with Portland Cem. Con.	1,577	617	2,194
10WC15	San Joaquin	75	A	Bet. Middle River & Holt	4.4	4/22/47	M.J.B. Construction Co.	Plant Mixed Surfacing	97,067	4,048	101,115
10W43	San Joaquin	75	B	Bet. Beginning of Section & Hewitt Rd.	12.1	8/19/46	Day Labor	Patching & Seal Coat	21,525	1,300	22,825
14WLC48	San Joaquin	97	A	Across Calaveras River	0.4	3/13/47	Elmer J. Warner	Grade, Surface, & Bridges	72,567	12,800	85,367
14AN2	San Joaquin	Access		At S.P. & W.P.R.R. Crossing on JX & Lathrop Rds.		3/12/45	Day Labor	Install Flashing Light Signals	14,000		14,000
14DC13	San Joaquin	FAS 901		Across Mokelumne River		4/23/47	A. A. Edmondson & A. L. Miller	Steel R.C. Bridge	164,234	16,365	180,599
				Various Locations				Minor Contracts & D.L. Projects	15,758	735	16,493
5VC13	San Joaquin	2	F, C	See Santa Barbara County							
5V9	San Luis Obispo	2	F, E	Bet. Nipomo & Pismo Beach	4.0	4/13/46	Day Labor	Stabilize & Raise Shldrs.	5,674	62	5,736
5VC7	San Luis Obispo	2	F	Bet. Santa Maria River & 1.5 Mi. S. of Nipomo	2.1	6/11/46	Fairey-Hammond, Inc.	Plant Mixed Surfacing	102,962	5,885	108,847
14XLC10	San Luis Obispo	33	D	Across Santa Rosa Cr. 9 Mi. E. of Cambria		6/18/47	E. G. Perham	R.C. Bridge	15,568	2,800	18,368
5X17	San Luis Obispo	56	A	Bet. Arroyo de la Cruz & San Carpojo Cr.	3.9	3/20/47	Day Labor	Resurfacing	14,000	500	14,500
14XLC11	San Luis Obispo	56	E	Across Villa Cr.		6/24/47	E. G. Perham	R.C. Slab Bridge	27,452	3,500	30,952
5X18	San Luis Obispo	57	B	At Gifford Cattlepass		4/ 9/46	Day Labor	R.C. Bridge	8,636	27	8,663
5DC2	San Luis Obispo	FAS 653		On Oso Flaco-Nipomo Rd., Bet. S.P.R.R. & 3.2 Mi. Easterly	3.2	4/11/47	A. Madonna	Bit. Surface Treatment	63,407	6,800	70,207

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost.	Const. engr.	Total
5DC1	San Luis Obispo	FAS 1086	-----	Bet. State Rte. 137 & Rinconada-Las Plumas Rd.	6.0	3/28/47	Nathan A. Moore	Grade & Imp. Base Material	\$50,410	\$5,100	\$55,510
4744	San Mateo	2	A	Various Locations	-----	-----	-----	Minor Contracts & D.L. Projects	10,718	-----	10,718
4TMC6	San Mateo	2	A, Burl	At Hillcrest Blvd. On El Camino Real, Bet. Rosedale Ave. & Primrose Rd.	10/22/46	Day Labor	-----	Traffic Signals	6,339	500	6,839
4TC36	San Mateo	68	A	At Geneva Ave. & near Visitation Ave.	8/ 7/47	Severin Electric Co.	-----	Traffic Signals	40,368	5,000	45,368
4TC32	San Mateo	68	B	At San Bruno Ave.	5/16/47	Chas. L. Harney, Inc.	-----	Signals & Channelization	80,484	10,000	90,484
4T55	San Mateo	68	B	At Main Entrance to S.F. Municipal Airport	3/27/46	Day Labor	-----	Traffic Signals	4,244	-----	4,244
4TC35	San Mateo	68	B	At Millbrae Ave.	1/30/47	Day Labor	-----	Traffic Signals	19,391	947	20,338
4TC36	San Mateo	68	C	At Holly St.	6/26/46	Day Labor	-----	Signal System	4,714	-----	4,714
4T41	San Mateo	68	C	At Broadway	6/21/46	Day Labor	-----	Traffic Signals	5,545	-----	5,545
14TC19	San Mateo	68	F, Burl	On Bayshore Freeway, Bet. South San Francisco & Burlingame	9/19/46	Day Labor	-----	Traffic Signals	8,500	500	9,000
4TC38	San Mateo	68	Bmt	At Balston Ave.	2/28/47	Carrico & Gautier	-----	Substructures for 4 Overcrossings	409,155	21,000	430,155
4TC24	San Mateo	68	Burl, SM	Bet. Broadway in Burlingame to State St. in San Mateo	8/13/46	Day Labor	-----	Traffic Signals	6,947	500	7,447
4TC30	San Mateo	68	S.M	At Third Ave.	6/22/46	Guy F. Atkinson Co.	-----	Grade & Pave with P.C.C. on C.R. B	676,635	79,000	755,635
4TC26	San Mateo	68	S.S.F	On Bayshore Freeway at Peninsular Ave.	12/31/45	Day Labor	-----	Revise Signal System	6,519	-----	6,519
4TC30	San Mateo	68	S.S.F, F, Burl	Bet. S.P.R.R. & 0.5 Mi. Southerly	1/22/46	Macco Const. Co.	-----	Steel Overcrossing	258,917	31,000	289,917
4WL6	San Mateo	105	A	Bet. Colma Cr. in South San Francisco & Broadway in Burlingame	0.5	6/25/46	Piombo Bros. & Co.	Grade & Construct Sand Drains	201,558	24,697	226,255
4DC2	San Mateo	FAS 1052	-----	At Pilarcitos Bridge, No. 35-15	5.1	10/ 9/46	Macco Corp. & Morrison-Knudsen Co., Inc.	Grading & Paving	2,931,746	189,000	3,120,746
4DC2	San Mateo	FAS 1052	-----	On Whipple Rd., Bet. Canada Rd., & Alameda de las Pulgas	2.9	2/21/47	Day Labor	Bridge Repairs	4,895	213	5,108
-----	San Mateo	-----	-----	Various Locations	-----	8/ 8/46	Piombo Bros. & Co.	Grading	158,435	1,587	160,022
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COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
5VC13	S.B., SIO	2	C, F	Bet. Zaca & Wignmore & Bet. 1.5 Mi. S. of Nipomo & Delisnigues Cr.	3.9	5/ 7/47	Brown & Doko	Plant Mixed Surfacing	\$117,444	\$11,000	\$128,444
5V10	Santa Barbara	2	C, M, L	Bet. Zaca & Santa Maria (Portions)	9.8	4/13/46	Day Labor	Stabilize & Raise Shldrs	16,297	141	16,438
5V8	Santa Barbara	2	F	Bet. El Capitan Cr. & Alcatraz	0.6	4/ 6/46	Day Labor	Plant Mixed Surfacing	8,998	61	9,059
5VC9	Santa Barbara	2	G	Bet. ¼ Mi. E. of Las Varas Cr. & ¼ Mi. E. of El Capitan Cr.	2.9	10/28/46	N. M. Ball Sons	Grading & Surfacing	396,166	30,000	426,166
5VC11	Santa Barbara	2	J	Bet. Sheffield Dr. & San Ysidro Rd.	1.3	4/ 1/47	N. M. Ball Sons	Grading & Surfacing	356,895	46,000	402,895
5VC10	Santa Barbara	2	P	At Hollister Wye, Bet. Santa Barbara & Goleta		12/ 2/46	L. H. Leonardi Elect. Const. Co.	Signal Systems	21,195	1,400	22,595
5VC8	Santa Barbara	2	P, Q	At Hollister Wye, Bet. Santa Barbara & Goleta		6/27/46	Jesse S. Smith	Grading & Plant Mixed Surfacing	142,320	23,396	165,716
5VC5	Santa Barbara	2	Q, G	Bet. Fairview Ave. & Teolote Cr.	4.7	10/ 3/45	Dinnitt & Taylor	Grading & Plant Mixed Surfacing	503,927	60,855	564,782
5VC6	Santa Barbara	2	Q	Bet. 0.25 Mi. W. of Rte. 80 & Fairview Ave.	3.7	1/ 7/46	Dinnitt & Taylor	Grading, P.M.S. & 2 Bridges	524,215	49,992	574,207
14VC27	Santa Barbara	2	S.B.	At Salispuedes Cr.		3/ 6/47	Maeco Corporation	Overhead Substructure	227,207	24,510	251,717
5X16	Santa Barbara	149	D	Bet. Mi. 0.00 & Mi. 2.60	2.6	3/20/47	Day Labor	Resurfacing	9,838	500	10,338
5DXC1	Santa Barbara	149	D	Bet. 2.6 Mi. E. of Buellon & Grand Ave.	2.3	4/29/47	Frank T. Hickey, Inc.	Grading & P.M.S.	108,892	19,000	128,892
	Santa Barbara			Various Locations				Minor Contracts & D.L. Projects	4,869		4,869
14TC2	Santa Clara	2	E	At Ford Rd. about 6 Mi. S. of San Jose		12/ 4/45	Earl W. Heple	Steel Undercrossing	59,621	10,837	70,458
14TC3	Santa Clara	2	E	At Coyote Cr. & Coyote Rd., about 6 Mi. S. of San Jose		12/ 4/45	Earl W. Heple	Steel Bridge & Undercrossing	265,799	33,750	299,549
4TC20	Santa Clara	2	Sfs, E	Bet. San Jose & 0.6 Mi. S. of Ford Rd.	8.1	12/20/45	N. M. Ball Sons	Grade & P.C.C. Paving	1,280,109	110,000	1,390,109
4T58	Santa Clara	2	MgH	Through Morgan Hill	1.0	3/20/47	Day Labor	Resurfacing	8,931	500	9,431
4TC37	Santa Clara	5	A	Bet. Alameda County Line & Milpitas	1.0	5/16/47	A. S. Jones	A.C. Surface & Cr. Run Base	45,443	7,030	52,473
4T47	Santa Clara	5	B	At Bassom Ave. & Race St.		11/21/46	Day Labor	Traffic Signals	15,692	915	16,607
4TC28	Santa Clara	5	B, Sfs	At Bassom Ave. & Park Ave.	1.3	7/10/46	Union Paving Co.	Grade & Pave	195,579	36,400	234,979
4T57	Santa Clara	5, 68	A, B	At Intersection of Oakland Rd. & Bayshore Hwy.		3/ 4/47	Day Labor	Traffic Signals	8,555	1,400	9,955

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4WC28	Santa Clara	32	C	About 1.25 Mi. W. of Merced Co. Line	0.1	4/29/47	Granite Const. Co.	Grade & Surface	\$11,673	\$2,000	\$13,673
4T62	Santa Clara	68	B, SJs	At McKee Rd.		4/17/47	Day Labor	Signals & Lights	7,365	439	7,804
4TC32	Santa Clara	68, 2	SJs	At Santa Clara St. Underpass in San Jose	0.5	2/ 6/47	Huetig & Schromm	Landscaping	15,623	1,811	17,434
14TC11	Santa Clara	68, 2	SJs	On Bayshore Freeway at Santa Clara St.		4/ 1/46	Fredrickson & Watson Construction Co.	Separation structure & Apprs.	412,721	50,000	462,721
4DC3	Santa Clara	FAS 992		On Leavesley & Ferguson Rds.	4.5	9/20/46	Granite Const. Co.	Grading and A.C. Paving	161,917	20,000	181,917
4DC4	Santa Clara	FAS 1000		On Stevens Cr. Rd.	0.4	12/30/46	Dan Caputo & Edward Keeble	Grading & Paving	59,445	6,335	65,780
4DC8	Santa Clara	FAS 1000		On San Jose-Stevens Cr. Rd.	3.5	8/29/47	A. J. Raich Paying Co.	Grade, P.M.S. & Widen 2 Bridges	192,285	23,500	215,785
4DC5	Santa Clara	FAS 1159		On N. Fourth St., Bet. Rte. 68 & San Jose	1.2	3/11/47	Piazza & Huntley	Grade & Pave	60,519	8,000	68,519
	Santa Clara			Various Locations				Minor Contracts & D.L. Projects	4,173		4,173
14WLC42	Santa Cruz	56	C	At Waddell Cr.	0.3	9/16/46	Granite Const. Co.	Bridge & Approaches	84,558	9,400	93,958
14DC20	Santa Cruz	FAS 1146		On Green Valley Rd.	0.5	6/27/47	Granite Const. Co.	Grade, P.M.S. & Bridge	62,641	1,400	64,041
	Santa Cruz			Various Locations				Minor Contracts & D.L. Projects	5,407		5,407
2T41	Shasta	3	C, D	Bet. O'Brien's Summit & Shasta Co. Line	1.3	4/17/47	Day Labor	Resurfacing	9,500	500	10,000
2T43	Sha, Tri	20	A, B	See Trinity County							
2TC18	Shasta	20	B	Bet. Shasta & Schilling	4.6	8/29/46	Harms Bros. & N. M. Ball Sons	Grading & Plant Mixed Surfacing	521,565	49,500	571,065
14WLC45	Shasta	20	C	Across Sacramento River at Redding		2/26/47	James I. Barnes Const. Co.	Bridge Substructure	285,713	22,880	308,593
2TLC2	Shasta	28	A	At Seaman's Gulch about 1 Mi. W. of Ingot.	0.8	11/20/45	A. A. Teslau & Son	Grading, Surfacing & Culvert	123,801	13,092	136,893

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2TC16	Shasta	28	B	Bet. 4.5 Mi. E. of Ingot & Montgomery Cr.	9.7	4/22/46	W. C. Railing	Surface with P.M.S.	\$71,959	\$4,392	\$76,251
2TL19	Shasta	28	D	At Middle Branch of Burney Cr.		5/15/47	Day Labor	Culvert	2,474		2,474
2TC8	Sha. Las.	28	E, AB	Bet. Fall River Mills & 8.3 Mi. E. of Bieber	30.2	5/ 8/45	M. J. Ruddy & Son	Repair with P.M. Bit. Matl., Cement Treated Base & Seal Coat	203,243	28,357	231,600
2DC3	Shasta	FAS 1072		Bet. Cottonwood & Anderson	10.8	6/ 8/46	Oilfields Trucking Co. & Phoenix Const. Co.	Grading & Surfacing	227,051	21,182	248,233
	Shasta			Various Locations				Minor Contracts & D.L. Projects	8,825	913	9,738
	Sierra			Various Locations				Minor Contracts & D.L. Projects	4,705		4,705
2TC17	Siskiyou	3	A	At North Entrance to Dunsuir		4/23/46	M. W. Brown	Correct Drainage	9,274	1,829	11,103
2TC15	Siskiyou	3	B	Bet. Weed & Yreka	20.4	4/ 1/46	Clements & Co. & Milo A. Browne	Repair with Imp. Base Matl. & P. M.S.	183,259	16,424	199,683
2T45	Siskiyou	3	C	Bet. Bailey Hill & State Line	1.6	5/12/47	Day Labor	Plant Mixed Surfacing	29,996	1,030	31,026
2TC14	Siskiyou	3	Yre, C	Bet. Yreka & Camp Lowe	13.3	3/25/46	Clements & Co.	Repair with C.R.B., P.M.S. & Seal Coat	178,838	12,707	191,545
2WL19	Siskiyou	46	A	At Davis Mine Cut, Br. No. 2-60		4/28/44	Day Labor	R.C. Box Culvert	8,165	1,380	9,545
2WL20	Siskiyou	46	A	At Mine Spillway, Br. No. 2-61		4/28/44	Day Labor	R.C. Box Culvert	6,800	1,193	7,993
2WL21	Siskiyou	46	A	At Steep Cr., Br. No. 2-62		4/28/44	Day Labor	R.C. Box Culvert	12,237	1,184	13,421
2WL22	Siskiyou	46	A	At Ourley Jack Cr., Br. No. 2-59		4/28/44	Day Labor	R.C. Box Culvert	9,923	1,938	11,861
2W10	Siskiyou	46	B	Bet. Happy Camp & Thompson Cr. (Portions)	11.8	4/27/45	Day Labor	Grading, Surfacing & Drainage	59,990	975	60,965
2WC10	Siskiyou	46	B, C	Bet. Thompson Cr. & 4 Mi. E. of Seiad	11.9	7/15/47	W. C. Railing	Road Mixed Surfacing	59,260	7,500	66,760
2W12	Siskiyou	46	D	Bet. Walker Bridge & Rte. 3	19.6	12/28/45	Day Labor	Widen Roadway & Restore Surfacing	79,922	4,295	84,217
2WC9	Siskiyou	82	D	Bet. Fort Jones & 2.2 Mi. E. of Moffett Cr.	7.5	6/ 5/47	Sheldon Oil Co.	Plant Mixed Surf. & Shldrs.	49,770	7,000	56,770

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2DC1	Siskiyou	FAS 753	A	Bet. Rte. 72, 3 Mi. N. of Dorris, & 4 Mi. W. of Hatfield	15.6	5/29/46	Utah Construction Co.	Grade & Gravel & Cement Base	\$536,042	\$43,078	\$579,120
	Siskiyou			Various Locations				Minor Contracts & D.L. Projects	8,034	34	8,068
10T36	Solano	7	B	Bet. Rockville Rd. & County Hospital	4.0	10/29/46	Day Labor	Surface Shldrs.	17,704	887	18,651
10TC18	Solano	7, 90	C, Vac	Bet. Fairfield & 3.5 Mi. N. of Vacaville	4.8	5/13/47	Fredrickson Bros.	Plant Mixed Surfacing	35,607	3,000	38,607
10TC9	Solano	7	D, I	Bet. Midway & 1.3 Mi. N. of Dixon	6.1	1/17/46	Fredrickson Bros.	Grading, P.C.C. Pav. & Bridges	1,078,243	55,355	1,133,598
10TC13	Sol. Yolo	7	E, A	Across Putah Cr. about 6 Mi. N. of Dixon		7/29/46	M. A. Jenkins	Repair Bridge	9,469	1,896	11,365
COF-8	Sol. C.C.	7	F, A	See Contra Costa County							
10TC21	Solano	7	Frid	Bet. Madison St. & Union Ave.		6/ 7/47	Ed. Pierce Elect. Co.	Traffic Signals	8,908	1,425	10,333
10TC8	Solano	7	Vac, D	Bet. Ulatis Cr. & Midway	6.0	12/ 5/45	Fredrickson Bros.	Grading, P.C.C. Pav. & Bridges	561,205	45,796	607,001
10W40	Solano	53	A, B	Bet. Suisun & Rio Vista		8/ 7/46	Day Labor	Repairing War Damage	60,162	2,899	63,061
14WLC47	Sol. Sac.	53	C, A	Across Sacramento River at Rio Vista		4/21/47	C. M. Allen	Repair Bridge	9,296	1,084	10,380
10W42	Solano	74	C	Bet. Benicia Arsenal Grounds & Cordelia	8.7	8/19/46	Day Labor	Resurfacing	41,259	2,127	43,386
10WC14	Solano	90	A	Bet. Rte. 7 & 0.5 Mi. N. of Sweeney Cr.	5.7	9/16/46	Fredrickson Bros.	Grade P.C.C. Pav. & 5 Bridges	541,388	42,100	583,488
10W46	Solano	90	A	Bet. Allendale Jct. & Winters		10/18/46	Day Labor	Repair Shldrs.	5,000		5,000
10W39	Solano	90	A	Bet. Allendale & Putah Cr. (Portions)	4.7	7/24/46	Day Labor	Resurfacing	15,953	800	16,753
14WLC54	Solano	99	A	Across Miner Slough		6/ 5/47	C. M. Allen	Widen Bridge	4,182	750	4,932
14TC26	Solano	99, 100	A, A	Cache Slough Ferry & Steamboat Slough Ferry		9/30/47	C. M. Allen	Three Ferry Ramps	6,704	1,375	8,079
14WC5	Solano	208	A	Across Napa River at West City Limits of Vallejo		3/ 1/46	Healy Tibbitts Const. Co.	Repair Bridge Fender	14,251	1,755	16,006
14DC8	Solano	FAS 1106, 1108, 1110		Across Pleasants Cr., Alamo Cr., & Tributary to Putah Cr.		4/ 4/47	G. M. Carr & Batti Rocca	Five Bridges	82,701	8,100	90,801
10ANC12	Solano	Access	Val	On Waterfront Rd., Bet. Virginia St., & Santa Clara St.	0.3	2/ 4/46	C. M. Sayar	Grading & A.C. Paving	31,903		31,903

COMPLETED CONTRACTS—JUNE 30, 1948—Continued.

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
-----	Solano	-----	-----	Various Locations	-----	-----	-----	Minor Contracts & D.L. Projects	\$1,937	\$91	\$2,028
4TC34	Sonoma	1	C	Bet. 3 Mi. N. & 1 Mi. S. of Petaluma	4.0	4/23/47	A. G. Raisch Co.	Surfacing	86,367	11,400	97,767
4TC21	Son, Mtn	1	C, A	Bet. 1 Mi. S. of Petaluma & Ignacio Wye	11.9	1/17/46	A. G. Raisch Co. & Harms Bros.	Grading, P.C.C. Pav. & Struct.	1,643,359	162,000	1,805,359
4W30	Sonoma	56	E	At Various Locations	-----	8/13/46	Day Labor	Improve Drainage	6,323	-----	6,323
14TC33	Sonoma	208	A	Across Tolay Cr. about 14 Mi. W. of Vallejo	-----	11/29/47	Evans Const. Co.	Redeck Bridge	8,532	1,800	10,332
14DC2	Sonoma	PAS 786	-----	Across Russian River at Hacienda	-----	9/13/46	Kiss Crane Co.	Steel & Concrete Bridge	123,197	12,770	135,967
10TC22	Sonoma	4	Cer	Various Locations	-----	6/10/47	L. H. Leonardi Const. Co.	Minor Contracts & D.L. Projects	19,111	231	19,342
14TC21	Sta, S.J.	4	B, A	On Fourth St. in Ceres	-----	4/25/47	Frederickson & Watson Const. Co.	Signals	13,999	2,275	16,274
10TC15	Sta, S.J.	4	B, A, Rip	Across Stanislaus River	-----	7/15/46	A. Telschert & Son, Inc.	Steel Bridge	354,632	26,000	380,632
10TC24	Sta, S.J.	4	B, A, Rip	Bet. Salida & 1 Mi. N. of Ripon	4.5	10/20/47	Evans Const. Co.	Grading & Paving	436,546	54,700	491,246
10TC19	Sta, Mer	110, 4	C, D	Bet. Salida & 1 Mi. N. of Ripon	-----	-----	-----	Barrier Posts & Guard Rail	9,901	1,500	11,401
14DC17	Stanislaus	PAS 912	-----	See Merced County	-----	-----	-----	-----	-----	-----	-----
-----	Stanislaus	-----	-----	Across Tuolumne River about 6 1/2 Mi. E. of Modesto	-----	5/22/47	Erickson, Phillips, & Welberg	R.C. Bridge	145,656	2,166	147,822
3TC28	Sut, Yub	3	Y.C.Mvl	Various Locations	-----	-----	-----	Minor Contracts & D.L. Projects	3,575	-----	3,575
14TC5	Sut, Yub	3	Y.C.Mvl	See Yuba County	-----	-----	-----	-----	-----	-----	-----
14TC30	Sutter	87	B	Sutter Bypass N. of Knights Landing	-----	10/23/47	Wm. S. Shedd	Repair Bridge	19,521	3,100	22,621
3TC18	Sut, Yub	87, 3	B, A, B	See Yuba County	-----	-----	-----	-----	-----	-----	-----
2TC13	Tehama	3	C	Bet. 6 Mi. of Red Bluff & Shasta Co. Line	7.1	1/21/46	Oilfields Trucking Co. & Phoenix Const. Co.	Grading & Plant Mixed Surf.	538,746	66,000	604,746

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2TC19	Tehama	3	D	Bet. Mill Race Cr. & Red Bluff	2.8	4/ 2/47	Morrison-Knudsen Co., Inc.	Grading & Plant Mixed Surf.	\$140,000	\$17,000	\$157,000
14TC8	Tehama	3	D	Across East & West Sand Sloughs, Sampson Slough, Paynes Cr., Salt Cr. & Salt Cr. Overflow		1/22/46	J. D. Proctor, Inc. & Dragline Rentals Co.	Const. 5 Bridges & Widen 2 Bridges	366,350	36,500	402,850
2TL15	Tehama	29	A	At Ramsey Cr., Br. No. 8-53		4/ 2/46	Day Labor	Repair Bridge	6,542	270	6,812
2TL16	Tehama	29	A	At Flopper Cr., Br. No. 8-54		6/ 3/46	Day Labor	Repair Bridge	9,832	269	10,101
2TL17	Tehama	29	A	At Dehaven Gulch, Br. No. 8-55		9/10/47	Day Labor	Repair & Reconstruct Deck	11,400	900	12,300
14WLC58	Tehama	29	E	Across S. Fork Cottonwood Cr.		8/28/47	C. M. Allen	Repair Bridge	12,692	1,700	14,392
	Tehama			Various Locations				Minor Contracts & D.L. Projects	6,060		6,060
1W22	Trinity	20	C, D	Bet. New River Bluffs & Cedar Flat		10/ 9/45	Day Labor	Bituminous Surfacing	17,000	321	17,321
41W10	Tri, Hum	20	CD, D	See Humboldt County							
2743	Tri, Sha	20	B, A	Bet. 1.4 Mi. E. of Buckhorn Maint. Sta. & 4.74 Mi. E. of Trinity Co. Line	6.45	4/17/47	Day Labor	Resurfacing	32,000	1,500	33,500
14WLC31	Trinity	29	A	Across Hayfork Cr. about 58 Mi. W. of Red Bluff		5/17/46	C. C. Gildersleeve	Bridge	9,582	1,028	10,610
14WLC55	Trinity	35	C	At Redding Cr.		6/12/47	C. C. Gildersleeve	Widening Bridge	19,775	2,500	22,275
	Trinity			Various Locations				Minor Contracts & D.L. Projects	1,900		1,900
14VC29	Tulare	4	A	At White River Sink		3/ 5/47	Wheeler Const. Co.	Bridge & Approaches	31,317	8,000	39,317
6XC13	Tul, Ker	4, 33	A, D	Bet. Delano & 2.5 Mi. S. of Earlmarkt & 2.1 Mi. E. of Wasco & Famoso	8.3	4/10/47	Griffith Company	Plant Mixed Surfacing	79,545	6,000	85,545
6VC3	Tulare	4	B, E, F	Bet. Quail Sta. & 6.5 Mi. N. of Goshen	13.5	4/13/45	Brown, Doko & Baum	Plant Mixed Bit. Material	110,714	12,176	122,890
6V14	Tulare	4	B, E, F	Bet. Re. 127 & 9.5 Mi. N. of Goshen		3/19/46	Day Labor	Restore Oiled Borders	15,681	229	15,910
6VC9	Tulare	4	E	Bet. 3.6 & 0.4 Mi. S. of Kingsburg	3.0	6/ 7/46	Valley Paving & Const. Co., Inc.	Repair with P.M.S. & Seal Coat	33,725	4,785	38,510
6XC10	Tul, Ker	129	A, AB	See Kern County							
6X22	Tulare	129	D	Bet. Cairn's Corners & 4.4 Mi. Northerly	4.4	3/20/47	Day Labor	Resurfacing	31,200	500	31,700

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14XC20	Tulare	129	E	At Yokohl Cr.	---	3/24/47	R. M. Price Co.	Bridge & Approaches	\$89,167	\$14,750	\$103,917
6XC12	Tulare	132	A, Vis	Bet. Packwood Cr. & Rte. 10	2.3	3/24/47	R. M. Price Co.	Grade & Plant Mixed Surf.	219,181	18,000	237,181
14DC32	Tulare	FAS 1126, 1137	---	Bet. 3 & 15 Mi. S. of Visalia (Portions)	---	12/ 9/47	Trewhitt, Shields & Fisher	4 R.C. Bridges	55,450	6,100	61,550
6DC8	Tulare	FAS 1128	---	Bet. 4 Mi. & 6.5 Mi. W. of Porterville	---	11/29/47	F. Gunnet Gramatky	I.B. & Plant Mixed Surfacing	51,497	4,000	55,497
14DC23	Tulare	FAS 1128	---	Across Tule River	---	7/23/47	Trewhitt, Shields & Fisher	R.C. Bridge	127,206	5,000	132,206
14DC14	Tulare	FAS 1130	---	Across White River about 7 Mi. SE. of Earlimart	---	5/16/47	E. H. Peterson & Son	R.C. Slab Bridge	15,136	850	15,986
6DC6	Tulare	FAS 1129, 1130	---	Bet. 2 Mi. W. of Woodville & Poplar	8.0	7/23/47	F. Gunnet Gramatky	Widen & Plant Mixed Surf.	183,226	10,000	193,226
14DC15	Tulare	FAS 1136, 1138	---	Across St. Johns River	---	5/12/47	Northup Const. Co.	R.C. Bridges	133,697	8,800	142,497
14DC28	Tulare	FAS 1140	---	At St. Johns River	---	10/10/47	Charles MacClosky Co.	Reconstruct Existing Bridge	65,467	8,000	73,467
14DC19	Tulare	FAS 1142	---	Across Kings River about 5.5 Mi. W. of Dinuba	---	6/ 4/47	Carl N. Swenson Co., Inc.	R.C. Girder Bridge	190,875	4,100	194,975
10TC16	Tulare	13	Sra	Various Locations	---	1/24/47	Beerman & Jones	Minor Contracts & D.L. Projects	6,268	172	6,440
---	Tuolumne	---	---	In Sonora on Stockton St.	0.4	2/4/47	---	Grading & Plant Mixed Surf.	79,140	15,300	94,440
---	Tuolumne	---	---	Various Locations	---	2/ 4/47	J. E. Haddock, Ltd.	Minor Contracts & D.L. Projects	5,591	---	5,591
7VC30	Ventura	2	C, Ven	Bet. Montalvo & Ventura	3.4	3/24/47	L. H. Leonardi Elect. Contr. Co.	Grading & Paving	606,869	62,800	669,669
7VC32	Ventura	2, 6, 79	C, A, Ven	At Inter. of Ventura Blvd. with Telephone & Telegraph Rds.	---	---	---	Traffic Signals	36,485	1,500	37,985

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7V63	Ventura	60	A	Bet. Oxnard & Big Sycamore.	5.7	3/25/47	Day Labor	Road Repairs	\$8,478		\$8,478
7VC36	Ventura	60	A	Bet. Oxnard & Big Sycamore Cr.	5.7	5/5/47	Baker & Pollock	Resurfacing with P.M.S.	86,264	\$4,500	90,765
7X49	Ventura	79	A	Bet. Sta. 486 & Sta. 513	0.5	2/21/46	Day Labor	Improve Drainage	5,194		5,194
7XC34	Ventura	79	A	Bet. Ellsworth Barranca & Santa Paula	4.0	5/9/47	O'Brien & Bell Const. Co.	P.M.S. & Shldrs.	23,456	2,600	26,056
7XL14	Ventura	138	B	N. Fork Matilija Cr., Br. No. 52-173		5/16/46	Day Labor	Replace Bridge	30,526	2,300	32,826
7V100	Ventura	138	Ven	In Ventura, Bet. Main St. & North City Limits	0.05	1/17/48	Day Labor	Resurfacing	7,804	131	7,935
7DC3	Ventura	FAS 868		On Pleasant Valley Rd., & Wood Rd., Bet. Ventura County R.R. & Ventura Blvd.	6.5	6/26/47	Frank T. Hickey, Inc.	Plant Mixed Surf.	154,179	15,800	169,979
7DC1	Ventura	FAS 877		On Las Posas Rd., Bet. State Hwy. Rte. 2 & State Hwy. Rte. 153	4.3	12/6/46	MacDonald & Kruse Inc.	Surfacing	68,575	6,042	74,617
	Ventura			Various Locations				Minor Contracts & D.L. Projects	8,675		8,675
3WC7	Yolo	6, 99	A, B	Bet. 1 Mi. E. of Davis & Swingle & Bet. 2.25 Mi. N. of Arcade Sta. & Js. Rte. 6.	7.3	5/21/46	A. Teichert & Son, Inc.	Repair with P.M.S. & C.R.B.	74,047	5,182	79,229
3WC12	Yolo	7, 87	A, A	Bet. 1.9 Mi. N. of Solano Co. Line & 1.6 Mi. S. of Woodland & Bet. 0.3 Mi. & 3.9 Mi. N. of Woodland	4.9	6/18/47	McGillivray Const. Co.	Plant Mixed Surfacing	45,714	5,000	50,714
3WC10	Yolo	7, 87	A, W, d, A	Bet. 1.25 Mi. N. of Solano Co. Line & Woodland & Bet. 3.75 Mi. N. of Woodland & 1 Mi. S. of Knights Landing	9.2	4/16/47	McGillivray Const. Co.	P.M.S. & Seal Coat	87,446	9,000	96,446
14TC13	Yol, Sol	7	A, E	See Solano County							
3TC25	Yolo	7	B, C	Bet. Cache Cr. & Dunnigan	14.0	5/21/46	Fredrickson Bros.	Repair with P.M.S. & C.R.B. & Place Imp. Borrow on Shldrs.	153,896	10,552	164,448
3TC65	Yolo	7	C	Bet. Zamora & Hershey	10.9	4/17/47	Day Labor	Prime & Seal Shldrs.	11,134	500	11,634
14WLC32	Yolo	50	E	At Tule Canal about 6 Mi. E. of Woodland		6/25/46		Bridge & Approaches	87,102	9,300	96,402
3WC13	Yolo	50	E	At W. Side of Yolo By-pass	0.1	7/29/47	M. A. Jenkins H & D Const. Co.	Grading & Surfacing	33,813	3,750	37,563
3WC8	Yolo	87	A	Bet. Woodland & Knights Landing	9.5	6/26/46	Folsom & Drollinger	Crusher Run Base Borders	35,221	2,313	37,534

COMPLETED CONTRACTS—JUNE 30, 1948—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
3WC11	Yolo	99	A	Bet. Solano Co. Line & 2 Mi. S. of Irrigation Canal	8.9	5/15/47	McGillivray Const. Co.	Construct Shldrs.	\$27,665	\$1,800	\$29,465
3W27	Yolo	99	B	Bet. Mi. 4.15 & Mi. 10.25		10/30/46	Day Labor	Borders	6,500		6,500
14DC7	Yolo	FAS 1154, 1152		Across Moody Slough & Across Cache Cr.		3/ 7/47	Chittenden & Chittenden	Two Bridges	74,252	7,800	81,852
	Yolo			Various Locations				Minor Contracts & D.L. Projects	10,650	85	10,735
3T43	Yuba	3	A	At Grasshopper Slough Overflow		4/22/46	Day Labor	Replace Timber Structure with C. M.P. Culvert & Fill	5,344		5,344
3TC18	Yub, Sut.	3, 87	BA, B	On Rte. 3 Bet. Morrison's Crossing & Linda Corners, Bet. Yuba City & Lomo, & on Rte. 87, Bet. Sutter Bypass & Tudor Rd.	12.2	6/ 4/45	Lester L. Rice	Repair with Imp. Bor. & P.M. Bit. Matl.	100,700	5,463	106,163
3TC28	Yub, Sut.	3	Mv1 Y.C	Bet. D St. Bridge in Marysville & Rte. 15 in Yuba City	2.0	6/22/46	Lester L. Rice	A.C. Surfacing	672,120	56,000	728,120
14TC5	Yub, Sut.	3	Mv1, Y.C	Bet. I St. in Marysville & Market St. in Yuba City	0.9	12/19/45	J. H. Pomeroy & Co., Inc.	Bridge & Approaches	1,845,096	79,500	1,924,596
14WLC37	Yuba	87	A	At Simmerly Slough		7/11/46	Lord & Bishop	Timber Bridge	13,641	1,135	14,776
	Yuba			Various Locations				Minor Contracts & D.L. Projects	1,095		1,095

INCOMPLETE CONTRACTS

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
4TC49	Alameda	5	B	At Redwood Road	0.3	4/22/48	J. R. Armstrong	Signals & Channelization	\$47,003
4TC42	Alameda	14, 5	Env.	In Emeryville	---	9/20/46	Day Labor	Traffic Signals	15,000
O-4TC48	Alameda	69	Oak	Bet. 38th Ave. & Oak St.	2.9	4/ 1/48	Frederickson & Watson Const. Co.	Grade & Surface	1,625,810
4TC102	Alameda	69	Oak	14th & 23d Aves. & Dennison St.	---	3/17/48	Day Labor	Storm Drains	295,500
O-14TC37	Alameda	69	Oak	Elmhurst Cr. Damon Slough & East Cr. Slough	---	4/ 1/48	E. H. Peterson & Son	3 Structures	277,712
14WC10	Alameda	69	Oak	At 23d Ave.	---	6/16/47	A. Soda & Son	Overcrossing	536,704
14TC31	Alameda	69	Oak	At 19th Ave.	---	10/22/47	Carl N. Swenson, Inc.	Overcrossing & Approaches	431,785
---	Alameda	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	14,125
10WC18-P	Amador	34, 65	Jkn. C	N. of Jackson to E. & S. of Jackson	2.3	6/ 9/47	Frederickson Bros.	Grade, Pave, & Structure	620,473
10T65	Amador	65	C	0.6 to 1.2 Mi. N. of Mokelumne River	0.6	4/ 6/48	Day Labor	Grade & Surface	22,000
10DC2	Amador	FAS 951	---	3.7 Mi. Ely. of Pine Grove to N. Fk. Mokelumne River	4.7	7/30/47	A. Teichert & Son, Inc.	Grade & Surface	235,276
---	Amador	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	8,345
O-3TC51	But. Sut.	3	A, Grd, A, Lio	See Sutter County	---	---	---	---	---
O-3TC49	Butte	3, 47	C, Che, D, Che	Nelson to Butte Cr. 7th Ave. to Pine Cr. & Hazel St. to Main St.	15.6	4/ 1/48	McGillivray Const. Co.	Grade & Surface	189,357
---	Butte	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	2,870
O-10TC33	Calaveras	24	B	2.6 Mi. to 4.9 Mi. E. of Valley Springs	4.2	4/29/48	A. Teichert & Son, Inc.	Plant-Mixed Surfacing	105,239
10DC1	Calaveras	FAS 952	---	Rte. 65 to Mountain Ranch	8.9	7/11/47	Louis Biasotti & Son	Grade & Surface	190,279
---	Calaveras	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	2,500
14DC10	Colusa	FAS 758	---	Sacramento River at Colusa	---	4/21/47	Lord & Bishop	Repair Bridge	156,500
3DC7	Colusa	FAS 1033, 1035, 1036	---	Williams to Stone Corral Creek	8.6	9/23/47	Frederickson & Kasler	Grade & Place Imported Borrow	82,327

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
COFC-1	Contra Costa	11	A	San Joaquin River at Antioch		6/ 8/48	H. F. Lauritzen	Repair Bridge	\$6,357
O-4TC61	Contra Costa	14	Her, B	Pinole O.H. to E. of Rodero	1.5	6/30/48	J. Henry Harris	Grade, Pave & Structure	137,182
4W39	Contra Costa	69	ECr	Potrero Ave.		11/ 1/46	Day Labor	Traffic Signal	8,250
O-4TC59	Contra Costa	75	D	Old River Bridge	0.2	6/18/48	J. R. Armstrong	Plant-Mixed Surfacing	95,592
O-4TC64	Contra Costa	106	A	Christie U.P. to Glen Frazier Station	1.7	6/29/48	Fredrickson & Watson Const. Co.	Grade & Surface	413,591
O-4TC57	Contra Costa	107	A	Ala. Co. Line to 0.2 Mi. S. of San Ramon Cr.	4.2	5/25/48	Granite Const. Co.	Grade & Surface	225,896
14DC9	Contra Costa	FAS 797		Across Pacheco Slough		4/14/47	Duncanson-Harrelson Co.	Swing Bridge	243,434
	Contra Costa			Various Locations				Minor Contracts & D.L. Projects	4,000
1T45	Del Norte	1	A	Hunter Creek		11/17/47	Day Labor	Redeck Bridge	6,750
1TC27	Del Norte	46	A	Turwar Creek, about 3 Mi. E. of Klamath	0.7	5/ 5/48	Baldwin Straub Corp. & Arthur B. Siri, Inc.	Bridge & Approaches	224,263
14DC34	Del Norte	FAS 985		Smith River about 12 Mi. NE. of Crescent City		3/11/48	Underground Const. Co.	Construct Bridge	90,600
	Del Norte			Various Locations				Minor Contracts & D.L. Projects	2,910
3T84	El Dorado	11	F	Pacific House Curve		4/15/48	Day Labor	Widen Curve	8,400
14WLC41	Pla. E. D.	65	A, A	See Placer County	0.1				
3T86	El Dorado	93	A	Placerville to Georgetown	1.1	6/14/48	Day Labor	Widen & Surface	45,000
3DC2	El Dorado	FAS 1099		Georgetown to U.S. Ranger Station	3.6	6/26/47	Miles & Bailey	Grade & Surface	84,638
	El Dorado			Various Locations				Minor Contracts & D.L. Projects	3,400
6GTC1	Fresno	4	B, Fre	Fresno C.L. to San Benito Ave.	1.2	6/30/47	Guy F. Atkinson Co.	Grade, Pave & Sep. Struct.	1,572,688
6TMC1	Fresno	4	Fow	Merced St. & Rte. 4		12/31/47	Severn Elect. Co.	Signals & Lighting	14,635

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
O-6TC12	Fresno	4	Fre, C	Belmont Circle to Clinton Ave.	1.8	4/15/48	Guy F. Atkinson Co.	Grade & Pave.	\$284,365
O-6TC13	Fresno	4	Fre, C	Belmont Circle to Clinton Ave.	---	5/19/48	Tri-Cities Elect. Serv.	Signals & Lighting	21,229
O-14TC44	Fre, Mad	4	C, A	San Joaquin River N. of Herndon	1.0	6/10/48	Erickson, Phillips, & Weisberg	Bridge & Approaches	747,909
6TC11	Tul, Fre	4	E, D, Kugb, A	See Tulare County	---	---	---	---	---
6TC8	Tul, Fre	4	E, D, Kugb, A	See Tulare County	---	---	---	---	---
6DC9	Fre, Tul	FAS 1142	---	0.1 Mi. W. of Tul. Co. Line to 1 Mi. E. of Kings River	1.9	2/27/48	P. J. Moore & Son & Harms Bros.	Grade & Bituminous Surface Treat.	67,700
14WLC46	Glenn	45	B, C	E. Branch, Rasor Slough & Sacramento River	0.6	2/26/47	Johnson-Western Co.	2 Bridges & Approaches	443,591
14WLC61	Glenn	45	B, C	E. Branch Rasor Slough & Sacramento River	---	9/17/47	Judson-Pacific-Murphy Co.	Superstructure for Bridge	259,340
O-14TC36	Glenn	45	C	Campbell Slough & Sacramento River Overflow	---	4/ 1/48	Chas. MacClosky Co.	Redeck 2 Bridges	85,902
3DC4	Glenn	FAS 531	---	Willows to Athena	8.5	7/23/47	H. Earl Parker, Inc.	Grade, Surface & R.C. Bridge	142,010
14DC33	Glenn	FAS 1119, 1120, 1121, 1122	---	Across Central & Provident Canals & at various locations NE. & S. of Willows	---	12/19/47	Erickson, Phillips & Weisberg	8 R.C. Bridges	201,140
14WC14-F	Humboldt	Whitemore Grove	Whitemore St. Park	S. Fork of Eel River near Redway	---	9/16/47	Reed and Tuttle	Repair Bridge	51,164
O-1TC25	Humboldt	1	E, F, Fta	Bet. N. Scotia Br. & 16th St. in Fortuna	2.8	4/28/48	Mercer-Fraser Co.	Grade & Pave.	620,672
14TC51	Humboldt	1	H	Eureka Slough	---	6/28/48	Tom Hull	Reconst. Bridge Fenders	18,858
O-1TC23	Humboldt	1	K	2.8 Mi. to 7.6 Mi. N. of Orick	4.8	4/ 1/48	Mercer-Fraser Co.	Grade & Plant-mixed Surf.	201,460
14WLC50	Humboldt	84, 46	B, C, D	Klamath River at Weitchpec	0.5	5/12/47	Clifford A. Dunn	Bridge Substructure & Appr.	308,968
14WC16	Humboldt	84, 46	B, C, D	Klamath River at Weitchpec	0.6	9/23/47	Guy F. Atkinson Co.	Bridge Superstructure	407,538

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
11VC15	Humboldt			Various Locations				Minor Contracts & D.L. Projects	\$11,761
	Imperial	12	E, ECn, F, Imp, G, Brw	El Centro to Brawley	13.1	5/16/47	Basich Bros. Const. Co. & Basich Bros.	Grade & Plant Mixed Surface	1,730,101
11VC18	Imperial	26	A, B, C	Trifolium Canal to Sandy Beach Road	15.1	9/22/47	R. A. Erwin & Cee Tee Const. Co.	Resurface	516,833
11VC34	Imperial	26	ECn, Imp.	In El Centro & Imperial		6/29/48	California Electric Works	Traffic Signals	24,352
O-14VC60	Imperial	27	D, A	East High Line Canal	0.5	6/29/48	Basich Bros. Const. Co. & Basich Bros.	Bridge & Approaches	132,732
O-11VC26	Imperial	201, 187	ABC, C	Bet. Rte. 26 & Calipatria & bet. Curlew & Alamo	6.6	4/9/48	MacArthur & Son	Plant-Mixed Surfacing	92,549
9VC10	Inyo	23	L, M	Alabama Gates to Manzanar	4.3	12/18/47	Basich Bros. Const. Co. & Basich Bros. & O. B. Pierson	Grade, Surface & Structure	241,343
9DC5	Inyo	FAS 1065		N. of Trona to Water Canyon	4.9	1/15/48	Swedlow Engr. Co., Inc.	Grade & Bituminous Surf. Treak	156,790
9DC6	Inyo	FAS 1068		Independence to Kearsarge	4.5	1/26/48	Browne & Krull	Grade, Pen. Tr. & Widen Br.	54,000
O-6VC20	Kern	4	C	Bet. Hoskins Rd. & Brundage Lane	5.1	5/19/48	Griffith Co.	Grade & Pave	850,883
O-6VC24	Kern	4	C	S. Chester Ave. & Strader Grade Xing		6/28/48	L. H. Leonardi Elect. Const. Co.	Signals & Lighting	14,093
6VC18	Kern	4	E	Bet. Cawelo & Famosa U.P.	6.4	4/19/48	E. G. Perham	Barrier Posts	25,014
6VC25	Kern	4	G, D	Minkler U.P. to Snow Road	1.4	6/28/48	Dico, Inc., & Dix-Syl Const. Co., Inc.	Plant Mixed Surfacing	20,907
O-6VC17	Kern	4, 140	BC, B	Grapevine to Switzers & Mi. 6.74 to Rte. 4	29.8	4/10/48	Dico, Inc. & Dix-Syl Const. Co., Inc.	Grade & Plant Mixed Surf.	425,880
6VC13	Kern	4, 141	Bkd, G, D, A	Bakersfield to Snow Rd. & Calloway Canal to Rte. 4	3.6	6/9/47	Griffith Co.	Grade, PCC, & Structure	1,451,987
O-9VC13	Kern	23	C	Bet. Ittners & Ricardo	2.4	5/12/48	Westbrook & Pope	Grade & Surface	47,414

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
6VC21	Kern	57	Bkd	Inter of Niles St. & Baker St.	---	5/20/48	Tri-Cities Elect. Serv.	Traffic Signals	\$4,156
6VC16	Kern	57	I	Bet. 2 Mi. S. of Isabella & Isabella	2.0	3/11/48	Munn & Perkins and Jorgenson & Matthew	Grade, Bit. Surf. Tr., & Bridge	174,380
14XC23	Kern	58	E, F	Bet. Keene & Tehachapi	---	8/15/47	Guy F. Atkinson Co.	2 Bridges	444,264
6VC19	Kern	58	G	½ Mi. E. of Monolith	0.2	4/19/48	Oilfields Trucking Co. & Phoenix Const. Co.	Grade & Plant Mixed Surf.	24,481
14VC57	Kern	129	A	Peso Creek	---	6/15/48	F. Fredenburg	R. C. Bridge	50,374
O-6VC23	Ker, Tul.	129	AB, A	Peso Creek to Ducor	23.9	6/23/48	Clyde W. Wood, Inc.	Seal Coat	26,195
6DC10	Kern	FAS 895	---	Rte. 33 to Lerdo Highway	8.4	5/27/48	Geo. E. France, Inc.	Grade & Penet. Treat.	245,300
---	Kern	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	8,028
O-14TC43	Lake	15	B	About 2.6 Mi. E. of Upper Lake	---	5/27/48	C. C. Gildersleeve	Cattlepass	6,631
1TC21	Lake	49	B	At Coyote Cr. about 6 Mi. N. of Middletown	0.5	3/ 2/48	Harold Smith	Bridge & Approaches	78,421
14TC41	Lake	49	C	Across Burns Valley Creek	---	4/21/48	C. C. Gildersleeve	Repair Bridge	6,663
1W30	Lake	89	E	N. of Redman Narrows Rd. to Rte. 15	2.0	2/20/47	Day Labor	Seal Coat	5,568
1DC5	Lake	FAS 1039	---	Rte. 89 to 1 Mi. W. of Lower Lake	5.1	8/13/47	Morrison-Knudsen Co., Inc.	Grade, Imp. Bor. & Seal Coat	134,600
1DC6	Lake	FAS 1039	---	1.0 Mi. to 2.1 Mi. E. of Rte. 89	1.1	11/29/47	George Stout	Imp. Bor. & Seal Coat	35,000
---	Lake	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	950
2T46	Lassen	28	B	Bieber to Modoc Co. Line	3.2	6/ 3/47	Day Labor	Surfacing	13,500
O-2TC24	Lassen	29	B	Fredenyer Pass to Susan River	6.3	4/ 9/48	Sheldon Oil Co.	Base & Plant Mixed Surf.	97,524
2WLC1	Lassen	29	C	At Baxter Creek N. of Jansville	1.1	8/21/47	Fredrickson & Watson Const. Co.	Grade, Surface, & Structure	116,938
7VC49	Los Angeles	2	LA, C	Bet. Calabasas & 1.5 Mi. Wly	2.2	11/17/47	Spicer Co.	Grade & Plant Mixed Surf.	367,512

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
7VC35	Los Angeles	2	L A	Vineyard Ave. to Barham Blvd.	1.8	5/28/47	Peter Kiewit Sons Co.	Grade, Surface & Structure	\$1,915,509
7VC32	Los Angeles	2	L A	Vineyard Ave. to Barham Blvd.		6/20/48	Tri-Cities Elect. Serv.	Lighting	44,187
7VC73	Los Angeles	2	L A	E. Edgeware Rd. to 0.05 Mi. Ely.	0.05	4/22/48	McClam Const. Co.	Grade & Pave.	17,955
14VC44	Los Angeles	2	L A	Virgil Ave., Hoover St. & Rosemont Ave.		1/20/48	Spencer Webb Co.	3 Structures	659,223
14VC37	Los Angeles	2	L A	At Virarado St.		10/20/47	Guy F. Atkinson Co.	Undercrossing	386,266
14VC38	Los Angeles	2	L A	At Vendome St. & Coronado St.		4/20/48	Chas. MacCloskey Co.	2 Undercrossings	380,226
14VC49	Los Angeles	2	L A	At Figueroa St.		2/27/48	Carlo Bongiovanni	4 Undercrossings & 2 Ramps	1,093,000
O-14VC34	Los Angeles	2	L A	Bonnie Brae St. & Beaudry Ave.		5/14/48	Haddock Co.	2 Grade Separation Strucls.	474,598
14VC32	Los Angeles	2, 165	L A	Int. of Hollywood Pkwy & Arroyo-Secco-Harbor Pkwy.		6/24/47	James I. Barnes Const. Co.	4 Level Structure	1,506,200
7VC59	Los Angeles	2	L A, D	Bet. Soto St. & Eastman Ave.	2.0	2/13/48	Griffith Co.	Grade & Pave.	1,208,917
7VC81	Los Angeles	4	F	Pico Canyon Rd. to Rte. 79	3.3	6/24/48	N. M. Ball Sons	Grade & Pave.	475,630
7VC57	Los Angeles	4	G, H	Violin Saddle to Whitaker Summit	4.4	2/ 6/48	Winston Bros. Co.	Grade & Surface	1,596,679
7VC38	Los Angeles	4	H	9 Mi. N. of Castaic to Frenchmans Flat	3.8	5/29/47	Winston Bros. Co.	Grade & Surface	1,733,219
7VS7	Los Angeles	4	H	Whitaker Summit to Piru Creek		10/20/47	Day Labor	Signs & Traffic Stripe	8,000
O-7VC78	Los Angeles	4, 79	F, A, B, A	S. of Santa Clara Riv. to Castaic Creek	2.6	6/10/48	Griffith Co.	PCC & AC	550,100
7VC53	Los Angeles	9	Muro, G, H, Gdr	Fifth Ave. to Glendora Ave.		1/17/48	Econolite Corp.	Signals & Lighting	89,098
O-7VC74	Los Angeles	23	G	Lancaster to Kern County Line	8.1	4/22/48	G. W. Ellis Const. Co.	PMS. and Bit. Surf. Tr.	112,709
O-7VC08	Los Angeles	23	I	Rte. 79 to ½ Mi. S. of Santa Clara River	4.0	4/ 1/48	Schroeder & Co.	Grade & Plant Mixed Surf.	88,252
O-7VC72	Los Angeles	26	A, EMte	Bet. New Ave. & Mountain View Ave.	3.9	4/15/48	Wm. Radkovich Co., Inc.	Grade & Surface	133,043
7VMC23	Los Angeles	26	Alh	Ramona Blvd. & Garvey Ave.		3/22/48	Econolite Corp.	Traffic Signals	14,702
7VC58	Los Angeles	26	L A	Bet. Macey St. & Indiana St.	1.8	2/13/48	Jannoch Nurseries	Landscaping	46,872
7VI02	Los Angeles	59	D	Across Sandy Creek		2/ 2/48	Day Labor	R. C. Box Culvert	6,350
7VS6	Los Angeles	60	B	0.4 Mi. Nly of L.A. City Limits		11/17/47	Day Labor	Reconstruct Culvert	12,300

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
7AVC3	Los Angeles	60	LA, G, LBch	Dominguez Channel to San Gabriel Ave.	0.7	4/25/46	James I. Barnes Const. Co.	Grade, Pave, & 4 Bridges	\$2,096,805
7VC80	Los Angeles	60	SMca	Colorado St. Tunnel to Lincoln Blvd.	0.6	6/18/48	J. E. Haddock, Ltd.	Base & Plant Mixed Surf.	91,914
7VC63	Los Angeles	60, 158	C, B	On Lincoln Blvd. at Jefferson Blvd., on Sepulveda Blvd., at Centinella Ave. & at Slauson Ave. & Jefferson Blvd.				Traffic Signals	55,682
47X1	Los Angeles	61	C, D	Chilao to W. Islip Saddle	3.0	6/21/41	Day Labor	Grading (Prison Labor)	1,108,400
7VI22	Los Angeles	62	B	North Fork of San Gabriel River		5/5/48	Day Labor	Replace Bridge	12,100
7VC65	Los Angeles	77	SGb, A, EMte	Bet. San Gabriel Blvd. & Hoyt Ave.		3/17/48	Electric & Machinery Serv., Inc.	Traffic Signals	38,009
7VI12	Los Angeles	158	B	Int. of Centinella Ave. & Slauson Ave. & Jefferson Blvd.		2/26/48	Day Labor	Signals & Channelization	10,800
7VC60	Los Angeles	164	A, Haw	Bet. Redondo Beach & Century Blvd.		2/20/48	C. D. Draucker, Inc.	Traffic Signals	90,225
7X100	Los Angeles	164	A	Mi. 1.03 Ely from Sepulveda Blvd.		10/2/47	Day Labor	CMP Culvert	6,100
14VC55	Los Angeles	165	LA	On Arroyo Seco Pkwy. at Alpine St.		5/14/48	G. W. Peterson	Overcrossing	148,664
14VC47	Los Angeles	165	LA	On Harbor Pkwy. at Temple St.		10/14/47	James I. Barnes Const. Co.	R.C. Undercrossing	415,213
7VC62	Los Angeles	167	A	Jardine & Everington Sts.		2/20/48	Econolite Corp.	Traffic Signals	14,926
7X66	Los Angeles	168	C	Colorado St. to Huntington Drive		2/6/48	Day Labor	Landscaping	5,800
7VI21	Los Angeles	170	Wit	Whittier Blvd. to Holbrook Ave.		4/16/48	Day Labor	Widen & Pave	20,488
7VC64	Los Angeles	173	A	Indiana St. to Anaheim-Telegraph Rd.		2/27/48	Electric & Machinery Serv., Inc.	Traffic Signals	26,448
7VC56	Los Angeles	173	SMca, LA	Lincoln Blvd. to Bundy Drive	2.3	2/2/48	J. E. Haddock, Ltd.	Grade & Surface	1,114,177
7VC79	Los Angeles	173	SMca, LA	Lincoln Blvd. to Bundy Drive		6/10/48	C. D. Draucker, Inc.	Traffic Signals	54,085
14DC35	Los Angeles	FAS 825		Across North Fork of San Gabriel River		4/9/48	Norman I. Fadel	Steel Bridge	400,605

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
14DC24	Los Angeles	FAS 880		Over Santa Clara River & SPRR.		7/31/47	Bent Const. Co.	Steel Bridge.	\$231,555
14DC22	Los Angeles	FAS 888		Across Los Angeles River at Florence Ave.	0.3	8/29/47	H. B. Nicholson	R. C. Bridge & Approaches	444,000
	Los Angeles			Various Locations				Minor Contracts & D.L. Projects	48,223
6TC10	Madera	4	A	San Joaquin River to Aroala School	7.1	1/15/48	Harns Bros.	Grade and Pave.	1,105,824
6TC19	Madera	4	Mad	"F" St. at Fourth St. and Sixth St.		5/21/48	Day Labor	Traffic Signals.	4,314
O-14TC44	Mad, Fre.	4	A, C	See Fresno County					
14DGT01	Madera	126	B	At the A.T. & S.F. R.R. East of Madera				Underpass and Approaches	163,782
	Madera			Various Locations	0.6	3/26/48	Trewhitt-Shields & Fisher	Minor Contracts & D.L. Projects	9,887
4TC50	Marin	1	A	North of Novato.		4/22/48	California Wire Cloth Corp.	Chain Link Fence.	805
O-4TC51	Marin	1	A	1.6 Mi. N. of Novato to Ignacio	2.3	4/29/48	A. G. Raich Co.	Plant Mixed Surfacing.	88,423
4TC60	Marin	1	C	At Greenbrae Intersection.		6/23/48	Brown-Ely Co., Conts.	Signals & Channelization	80,572
4DC9	Marin	FAS 879		Point Reyes Sta. to 9 Mi. West of Novato.	9.9	4/22/48	A. G. Raich Co.	Grade and Plant Mixed Surf.	223,000
	Marin			Various Locations				Minor Contracts & D.L. Projects	2,300
	Mariposa			Various Locations				Minor Contracts & D.L. Projects	4,986
ITC24	Mendocino	1	C, D	1.5 Mi. S. to 3.5 Mi. N. of Forsythe Creek.	5.2	4/14/48	Guy F. Atkinson Co.	Grade, PMS, & Bridge	1,036,228
O-ITC22	Mendocino	1	H, I	Bet. 2.8 Mi. S. & 1.0 Mi. N. of Rattlesnake Summit.	3.8	4/1/48	C. M. Syar	Grade and Pave.	131,170
14TC35	Mendocino	1	J	At Rock Creek.	0.6	1/26/48	H. W. Ruby.	Bridge and Approaches.	191,421
ITC17	Mendocino	1	K	Red Mountain Creek to Piercy	4.6	10/31/46	Oilfields Trucking Co., and Phoenix Const. Co.		
							Johnston Rock Co.	Grade and Pave.	905,377
14TC29	Mendocino	48, 56	C, CD	Navarro River to 4 Mi. S. of Albion	0.8	11/6/47		Bridge and Approaches.	471,432

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
O-17C26	Mendocino	56	A	At St. Ores Creek, about 11.5 Mi. S. of Pt. Arena	0.5	5/ 5/48	Arthur B. Siri, Inc. and Baldwin-Straub Corp.	Grade, RMS, & Culvert	\$83,860
14WLC56	Mendocino	56	E	Across Noyo River		6/27/47	J. H. Pomeroy & Co., Inc.	Bridge Superstructure	527,509
O-17C28	Mendocino	56	F	At Virgin Creek	0.3	6/ 7/48	John Burnan & Son	Grade, Surface, & Bridge	70,475
1WLC7	Mendocino	56	F	At Kibblesiah Creek	0.5	6/27/47	Arthur B. Siri, Inc.	Grade and RMS	88,969
17MCI	Mendocino	56	FBg	South City Limits of Ft. Bragg to Oak St.	0.2	6/ 8/48	Arthur B. Siri, Inc.	Grade and RMS	17,064
14DC36	Mendocino	FAS 982		Across Chamberlain Creek		5/25/48	Evans Const. Co.	R. C. Bridge	24,025
	Mendocino			Various Locations				Minor Contracts & D.L. Projects	8,745
107C28	Merced	4	Mer	On 16th St. in Merced		2/20/48	R. Gould & Son	Traffic Signals	7,429
O-107C31	Mer, Sta	4	A, C, A, B	Bet. Madera County Line and Salida		4/ 9/48	Louis Biasotti & Son	Barrier Posts	59,182
147C47	Merced	32	A, B	At San Luis Creek	0.7	6/23/48	Granite Const. Co.	Bridge & Approaches	147,447
	Merced			Various Locations				Minor Contracts & D.L. Projects	500
147C46	Modoc	28	A	North Fork of Ash Creek		6/11/48	Evans Const. Co.	Widen Bridge	9,658
2744	Modoc	28	A, B	Adin to Alturas		4/28/47	Day Labor	Widen Structure	72,000
27C21	Modoc	210	A, A	Lassen County Line to Canby & 6.8 Mi. to 7.4 Mi. NW	20.8	5/16/47	Harns Bros.	Base and Seal Coat	178,143
2DC5	Mod, Sis	210, 753	B, A	Rte. 72 to 4 Mi. W. of Hatfield and 2.4 Mi. N. of Stronghold to Oregon State Line	22.8	5/ 1/47	Farrey-Hammond, Inc. & R. A. Farish	PMS and Seal Coat	195,484
	Modoc			Various Locations				Minor Contracts & D.L. Projects	2,775
O-4VC12	Mono	40	D	Bet. Sheep Corral and Adobe Creek	16.0	5/ 6/48	Oilfields Trucking Co. and Phoenix Const. Co.	Bituminous Surface Treatment	51,221
O-4VC14	Mono	95	A	7 Mi. N. of Coleville to Nevada State Line	2.2	6/ 8/48	Westbrook & Pope	Grade and Surface	112,005

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
9DC7	Mono	FAS 1092		Rte. 23 to 10.5 Mi. Easterly	10.8	6/ 8/48	Browne & Krull	Grade and Penetration Treat.	\$50,750
	Mono			Various Locations				Minor Contracts & D.L. Projects	4,775
5TT10	Monterey	2	C	At Station 98+00		10/30/46	Day Labor	Culvert	5,200
O-5TC10	Monterey	2	G, F	Bet. San Ardo and King City	3.6	4/22/48	Granite Const. Co.	Plant Mixed Surfacing	233,047
O-14TC42	Monterey	56	B	Across Prewitt Creek		5/24/48	Chas. O. Bodenhamer	Repair Bridge	22,274
O-14TC49	Monterey	56	F, G	15 Mi. to 26 Mi. South of Monterey		6/23/48	Chas. O. Bodenhamer	6 R.C. Culvert	31,587
14DC25	Monterey	FAS 1084		On Sanborn Road at S.P. Tracks		9/18/47	Dan Caputo	Overcrossing	202,420
	Monterey			Various Locations				Minor Contracts & D.L. Projects	9,200
4DC6	Napa	FAS 607		On Silverado Trail, 4 Mi. Northwest of Napa to Calistoga	4.7	5/ 1/47	Geo. E. Murray	Grade, Surface, and Bridge	111,150
3TC41	Nevada	17	B	½ Mi. North of Rattlesnake Creek to Grass Valley	3.8	10/22/47	Fredrickson Bros.	Crusher Run Base & PMS	392,678
3TS8	Nevada	25	NevC, A	Nevada City to 1.75 Mi. Northwest	1.7	10/29/46	Day Labor	Grade	38,717
3TC45	Nevada	37, 38	BC, A	Bet. Kingvale & ½ Mi. West of Fox Farm, bet. Donner Summit & 1 Mi. East, and at Flycasters Curve, 4½ Mi. East of Truckee	3.7	12/12/47	H. Earl Parker, Inc.	Grade and Surface	209,485
	Nevada			Various Locations				Minor Contracts & D.L. Projects	750
7V133	Orange	2	F	Station 89+00 to Station 99+70	0.32	6/30/48	Day Labor	Drainage Improvement	9,724
7VC55	Orange	2, 178	Ana	On Los Angeles St. in Anaheim		1/21/48	Prescott Elect. & Mfg. Co.	Signals and Lighting	50,000
7VC71	Orange	43, 179, 183	A, A, A	On Harbor Blvd.		4/ 1/48	Tri-Cities Elect. Service	Signals and Lighting	33,976
7V124	Orange	60	A, B, NptB	1.3 Mi. S. of Los Patos Ave. to Rte. 43	5.3	5/11/48	Day Labor	Subsealing	20,500

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
7VC76	Orange	60	A, NptB	1.3 Mi. S. of Los Patos Ave. to Rte. 43	5.5	6/ 4/48	Sully-Miller Contracting Co.	Resurfacing	\$276,465
O-7VC75	Orange	60	NptB	Bet. Rte. 43 & Irvine Ave.	0.6	5/13/48	Baker & Pollock	Plant Mixed Surfacing	53,077
7VC51	Orange	60	B, A, NptB	Newport Beach and Vicinity		12/18/47	C. D. Draucker Co.	Signals and Lighting	84,169
7X98	Orange	171	A	13th St. to 15th St.		9/11/47	Day Labor	Side Drain	7,500
	Orange			Various Locations				Minor Contracts & D.L. Projects	9,745
3TC33	Placer	17	C	Wise Canal to Rock Creek	1.9	3/11/47	Fredrickson & Watson Const. Co.	Grade, Surface, & Underpass	281,106
3TC34	Placer	17, 37	B, Aub	At Nevada St. and East St. Undercrossing		4/ 1/47	L. H. Leonardi Elect. Const. Co.	Lighting System	11,710
3TC50	Placer	37	Aub, A	Nevada St. to ½ Mi. East of Auburn	1.8	4/ 1/48	Fredrickson & Watson Const. Co.	Fence and Posts	15,853
14WLC41	Pla, ED	65	A, A	North Fork of American River	0.3	9/16/46	H. W. Ruby	Bridge and Approaches	282,881
3DC5	Placer	FAS 768, 769, 770		Loomis to Auburn and FAS Rte. 768 to Newcastle	11.9	8/ 7/47	H. Earl Parker, Inc.	Grading	167,200
	Placer			Various Locations				Minor Contracts & D.L. Projects	4,950
O-2TC26	Plumas	21	A	Bet. Rock Creek and Belden	1.9	4/21/48	Pionbo Const. Co. & M. & K. Corp.	Grading	993,618
2TC29	Plu, Sha, Tri	21, 20	B, B, A	Near Keddle, Schilling, and Douglas City		6/24/48	Liston Elhorn	Truck Scales	33,160
O-14TC40	Plumas	83	A	Across Sulphur Creek		4/19/48	Chittenden & Chittenden	Bridge and Approaches	67,116
14DC1	Plumas	FAS 523		At Hamilton Branch		5/ 9/45	Kiss Crane Co.	Steel Girder Bridge	80,390
	Plumas			Various Locations				Minor Contracts & D.L. Projects	2,160
8VC23	Riverside	26	C	East City Limits of Banning to Rte. 187	10.5	5/27/48	Basich Bros. Const. Co. & Basich Bros.	Plant Mixed Surfacing	206,373

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
O-11VC27	Riverside	26	E	Bet. Edom and 2.9 Mi. North of Indio	7.4	4/ 1/48	R. P. Shea Co.	Plant Mixed Surfacing	\$91,250
14VC43	Riverside	26, 64	C, Q	On Rte. 26 bet. 34 and 42 Mi. NW of Indio and on Rte. 64 about 6 Mi. West of Indio	12/31/47	12/31/47	E. S. & N. S. Johnson	Redefect 5 Bridges	45,951
O-14VC51	Riverside	43	B	At Temescal Wash	* 0.5	4/ 1/48	Dinnitt & Taylor and K. B. Nicholas	Bridge and Approaches	204,924
O-11VC32	Riverside	64	E, Bly	4 Mi. West of Blythe to Colorado River	8.3	6/24/48	Basich Bros. Const. Co. & Basich Bros.	Plant Mixed Surf. on CRB	258,853
11VC21	Riverside	64	E, Bly, F	4 Mi. West of Blythe to Colorado River	1.8	1/20/48	Arthur A. Johnson	Grade, B.S.T. & Structure	238,210
8VMC2	Riverside	64	Hem	In Hemet bet. State St. and East City Limits	0.8	8/ 8/48	R. A. Erwin	Plant Mixed Surfacing	13,649
8VC27	Riverside	77	A	San Diego County Line to North of Temecula	5.9	6/24/48	Morrison-Knudsen Co., Inc.	Grade, Surface & 2 Bridges	804,514
11VC28	Riverside	187	B, F	3 Mi. SE of Mecca to 2.3 Mi. S. of Thermal	6.8	5/21/48	Hensler Const. Corp.	Grade, BST, & Structures	465,604
8VC16	Riverside	187	D	Whitewater Point to 0.5 Mi. N. of Palm Springs	4.1	12/11/47	Peter Kiewit Sons Co.	Grade, Surface, & Structure	430,251
O-8VC22	Riverside	187	C	Bet. 0.1 Mi. & 0.6 Mi. East of Cathedral City	0.1	5/13/48	Westbrook & Pope	Grade and PMS	66,723
O-8VC26	Riverside	193	B	Bellgrave Ave. to Rte. 19	3.0	6/10/48	R. A. Erwin	Plant Mixed Surfacing	65,061
	Riverside			Various Locations				Minor Contracts & D.L. Projects	3,700
14GFC2	Sacramento		Sac	At 12th St. Underpass in Sacramento	0.2	6/ 3/48	Bates & Rogers Const. Corp.	Underpass and Approaches	788,750
3TC46	Sacramento	3	B	No. Sac'to Viaduct to 0.5 Mi. East of Ben Ali	2/ 4/48	2/ 4/48	Master Plumbing & Heating Co., Inc.	Landscaping	87,732
3TC36	Sacramento	3	B	No. Sac'to Viaduct to 0.5 Mi. East of Ben Ali	8/ 5/48	8/ 5/48	Day Labor	Signs and Traffic Stripe	7,910
3TC43	Sacramento	3	B	No. Sac'to Viaduct to 0.5 Mi. East of Ben Ali	11/13/47	11/13/47	Luppen & Hawley, Inc.	Lighting	34,930
3TC44	Sacramento	4	B, Sac	Int. of Stockton Blvd. and 14th Ave.	12/17/47	12/17/47	A. Teichert & Son, Inc.	Widening and Signals	30,043
O-3TC54	Sacramento	11	B, A	1 Mi. West of Nimbus to Whiteoak	7.3	6/18/48	Geo. Pollock Co.	Grade, Pave and Structure	766,989
10TC26	Sacramento	11	C	At Three Mile Slough	1.2	1/26/48	Sheldon Oil Co.	Grade & Surface Approaches	85,749
14WLC53	Sacramento	11	C	At Three Mile Slough	6/20/47	6/20/47	Johnson Western Co.	Bridge Substructure	270,341
14TC32	Sacramento	11	C	At Three Mile Slough	11/ 5/47	11/ 5/47	Judson, Pacific, Murphy Corp.	Bridge Superstructure	589,260

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
O-3TC52	Sacramento	54	B	At Sloughhouse	1.6	5/11/48	Brighton Sand & Gravel Co. and Lew Jones Const. Co., Inc.	Grade, Surface, and 3 Bridges	\$238,101
3DC6	Sacramento	FAS 937		Arden Way to Route 3	1.9	8/13/47	George E. France	Grade and Armor Coat	79,200
O-14TC38	SBt, SCR	67	A, A	At Pajaro River	0.9	4/1/48	Dan Caputo & Edward Keeble	Bridge and Approaches	216,473
	San Benito			Various Locations				Minor Contracts & D.L. Projects	4,200
O-8VC20	San Bernardino	9	D, Upl, A, C	Bet. Los Angeles County Line & San Bernardino	9.0	4/15/48	Match Bros.	PMS and Seal Coat	179,760
8VC19	San Bernardino	9, 192	Upl	Int. of Foothill Blvd. & Euclid Ave.		4/1/48	Tri-Cities Elect. Serv.	Signals and Channelization	24,012
8VC14	San Bernardino	19	A, Ont, B	Los Angeles County Line to 0.6 Mi. East of Ontario	5.7	10/14/47	Morrison-Knudsen Co.	Grade and PMS	1,040,537
8VC15	San Bernardino	19, 192	Ont	Int. of Euclid Ave. and Route 19		10/29/47	Paul R. Gardner	Traffic Signals	15,935
8VC24	San Bernardino	26	A	On Colton Ave.		6/4/48	Els-Hokin & Galvan	Traffic Signals	22,066
8VC17	San Bernardino	26	E, A, Rld	Bet. "E" St. and State St. in Redlands		2/20/48	Geo. Herz & Co.	Grade, Surface, and Bridge	958,474
8VC25	San Bernardino	31	B	Cajon Pass Hwy. near Blue Cut	7.2	6/10/48	Match Bros.	Truck Scales	13,813
14VC56	San Bernardino	31	H, J, K, L	28 to 70 Mi. East of Barstow		5/28/48	Thomas Const. Co.	Redeck 13 Bridges	95,690
14VC50	San Bernardino	58	L	Across Teviot Creek		4/1/48	L. V. Mulherron	R. C. Bridge	20,701
O-8VC18	San Bernardino	207	A	0.7 Mi. East of Plunge Creek to Long Point	1.8	4/1/48	Claude Fisher Co., Ltd., and L. R. & R. S. Crow	Grade and PMS	850,219
8XC14	San Bernardino	207	A	City Creek Bridge to 0.7 Mi. East of Plunge Creek	4.3	9/30/47	Westbrook & Pope	Grade, PMS, and R. C. Bridge	917,177
8X10	San Bernardino	207	A	Highland Ave. to City Creek Bridge		2/9/48	Day Labor	Erosion Control	5,000
8DC6	San Bernardino	FAS 711		Bet. Waterman Ave. and 0.2 Mi. East of City Creek	4.5	3/26/48	E. L. Yeager	Grade, PMS, and Bridge	269,000
	San Bernardino			Various Locations				Minor Contracts & D.L. Projects	10,838

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
11VC29	San Diego	2	Ocn	Int. of Hill St. and Vista Way	---	6/10/48	Tri-Cities Elect. Serv.	Traffic Signals	\$10,700
11VC23	San Diego	2	Ocn	Int. of Wisconsin Ave. with Second St., Third St., & Sixth St.	---	2/20/48	California Elect. Works	Traffic Signals	27,291
11VMC10	San Diego	2	SD	Int. of Fifth Ave. & Harbor Dr.	---	3/ 4/48	Tri-Cities Elect. Serv.	Traffic Signals	11,009
11VMC13	San Diego	2	SD	Pacific Highway at Balboa Ave.	---	4/ 6/48	California Elect. Works	Signals and Lighting	12,516
11V46	San Diego	12	D	Willows to Sweetwater River (portions)	6.3	4/22/48	Day Labor	Grade	60,000
11VC22	San Diego	City St. 12	SD	Int. of Washington & Normal Sts. and ints. of El Cajon Blvd. with Park Blvd., Texas St. & Rolando Blvd.	---	2/20/48	Tri-Cities Elect. Serv.	Signals and Lighting	48,132
11VMC12	San Diego	12, 200	SD	At College Ave. and El Cajon Blvd. and at 30th St. and Market St.	---	3/23/48	Els-Hokin & Galvan	Traffic Signals	19,690
O-11VC30	San Diego	77	A, B	Miramar to Lake Hodges	12.0	6/16/48	Griffith Co.	Grade, Pave, and Structure	1,887,699
11VC35	San Diego	77	B, East, F	0.9 Mi. S. to 0.3 Mi. N. of Escondido	3.0	6/29/48	Griffith Co.	Grade, Surface and 2 Bridges	778,396
11X30	San Diego	77	F, G	Escondido to Station 380	6.0	8/30/46	Day Labor	Grade (Prison Labor)	564,200
411X4	San Diego	77	G	Mossa Creek to San Luis Rey Bridge	1.5	6/30/41	Day Labor	Grading (Prison Labor)	1,319,204
14VC42	San Diego	78	D	Agua Caliente Creek and Buena Vista Creek	0.5	12/17/47	E. S. & N. S. Johnson	2 R. C. Bridges & Approaches	100,006
11V41	San Diego	195	B	Live Oak Creek	---	2/ 2/48	Day Labor	Grade Approaches	15,400
O-14VC39	San Diego	195	B	At Live Oak Creek	---	6/29/48	E. G. Perham	R. C. Bridge	24,331
14VC48	San Diego	198	F	At San Felipe Creek about 15 Mi. E. of Julian	0.3	2/16/48	Walter H. Barber	Bridge and Approaches	106,722
11VC25	San Diego	199	A	National Ave. at Palm Ave.	---	3/22/48	Els-Hokin & Galvan	Traffic Signals	6,307
11VC24	San Diego	200	SD	Euclid Ave. at Federal Blvd.	---	3/11/48	California Elect. Works	Traffic Signals	11,616
---	San Diego	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	15,905
14GF9	San Francisco	Fdr	SF	Int. of Third St. with Carroll St. & 25th St.	---	1/14/48	Day Labor	Traffic Signals	12,205
4T103	San Francisco	2	SF	On Alemany Blvd., from Sta. 36 to Bayshore Blvd.	---	3/29/48	Day Labor	Reconstruction	96,000

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
10TC25	San Joaquin	4, 5	F, Skn, C	Mariposa Rd. to Calaveras River, and "D" St. to Rte. 4 in Stockton	6.3	12/ 4/47	Lord & Bishop and M.J.B. Const. Co.	Grade, Pave, and Structures	\$1,677,749
14TC25	San Joaquin	5	B	San Joaquin River at Mossdale		9/22/47	Judson, Pacific-Murphy Corp.	Bridge Superstructure	477,004
10TC30	San Joaquin	5	Tra	Bet. East St. and Roosevelt Ave. on 11th St.		4/ 9/48	Parker Electric	Traffic Signals	14,007
	San Joaquin			Various Locations				Minor Contracts & D.L. Projects	6,525
5V18	San Luis Obispo	2	D	Near Santa Margarita		4/ 5/48	Day Labor	Truck Scales	15,500
5VC14	San Luis Obispo	2	D	San Luis Obispo to Cuesta Grade	2.7	6/20/47	Frederickson & Kasler	Grade and PMS	845,247
5VC15	San Luis Obispo	2	E, SLO	Miles Station to Marsh St.	6.6	11/ 4/47	Frederickson & Kasler	Grade, CRB & PMS	1,558,265
O-5VC16	San Luis Obispo	2	F	Bet. Deleissigues Cr. & Russel Turn.	2.3	4/ 1/48	Madonna Const. Co.	Grade and PMS	149,311
5VC19	San Luis Obispo	2	PBeh, E	Bet. Pismo Beach and Miles Station	4.9	4/29/48	Frederickson & Kasler	Grade, Surface, and Bridge	1,230,517
5VC17	San Luis Obispo	2	SLO	At Marsh St. and Higuera St.		4/ 6/48	L. H. Leonardi Elect. Const. Co.	Traffic Signals	17,918
O-14VC52	San Luis Obispo	33	E	Across Rocky Creek East of Cambria		4/22/48	D. M. Piburn	R. C. Bridge	18,572
O-14VC58	San Luis Obispo	125	B	Across Salinas River		6/18/48	O. R. Ochs & Son	Redeck Bridge	18,976
5DC3	San Luis Obispo	FAS 678		Bet. Rte. 56 and ½ Mi. West of Los Osos Creek	3.1	3/11/48	Madonna Const. Co.	Grade and Imported Borrow	67,900
5DC4	San Luis Obispo	FAS 1086		Bet. Rte. 137 and Rinconada-Las Pilitas Road	6.1	6/ 7/48	Ned. H. Mulleneaux	B.S.T. and Pen. Tr.	17,830
	San Luis Obispo			Various Locations				Minor Contracts & D.L. Projects	5,850
4TC52	San Mateo	2	A	Junipero Serra Blvd. & Santa Ynez Ave.		4/29/48	Jensen & Pitts	Signals and Channelization	49,406
4TC55	San Mateo	56	A	At Whitehouse Creek and Gazos Creek	0.2	5/13/48	Gordon L. Capps	Grade, Surface, and Bridges	56,837
4WC30	SM, SCR	56	A, C	See Santa Cruz County					
4TS8	San Mateo	68	D	Willow Road		1/19/48	Day Labor	Signals and Channelization	10,700

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
4TC46	San Mateo----	68	Burl, SM	Broadway in Burlingame to Peninsular Ave. in San Mateo.	2.0	2/13/48	Huetting & Schromm----	Landscaping----	\$11,630
4T81	San Mateo----	68	SSF, F, Burl	Colma Creek to Broadway in Burlingame----	4.9	4/29/48	Day Labor----	Signs & Traffic Stripe----	20,000
14TC24	San Mateo----	68	F, Burl	At S. F. Airport, San Bruno, Millbrae Ave. & Broadway----	---	8/ 7/47	Carrico & Gauthier----	4 Overcrossings----	1,088,795
4T94	San Mateo----	68	SSF, F, Burl	So. San Francisco U.P. to Broadway in Burlingame----	2.1	2/24/48	Day Labor----	Restore Grade----	7,200
4TC46	San Mateo----	68	SSF	North City Limits of So. San Francisco to Colma Cr.	2.1	8/21/47	Guy F. Atkinson Co.----	PCC and AC----	1,159,686
4T74	San Mateo----	68	SSF	San Francisco to Burlingame----	---	9/10/47	Day Labor----	Traffic Signals----	24,480
14TC23	San Mateo----	68	SSF	At Main Line & Belt Line RR in So. San Francisco----	---	6/27/47	J. H. Fomeroy & Co., Inc.----	2 Overcrossing Superstructures----	715,367
14TC20	San Mateo----	68	SSF	In South San Francisco----	---	4/11/47	Harry J. Oser & Peter Sorenson----	2 O. C. Substructs. & 3 Bridges----	533,332
4TC53	San Mateo----	68	SSF, F, Burl	Colma Cr. in S.S.F. to Broadway in Burlingame----	4.9	5/ 5/48	Frank W. Smith----	Armor Coat----	28,550
4DC7	San Mateo----	FAS 1048		2.5 Mi. N. of Woodside to Ralston Ave.----	4.7	6/30/47	Edward Keeble----	Grade and Surface----	285,240
14VC36	Santa Barbara.	2	D	Nojoqui Creek and Santa Ynez River----	---	10/ 8/47	C. B. Tuttle Co.----	2 Bridges----	574,337
O-5VC18	Santa Barbara.	2	D	Bet. Santa Ynez River and Jonata Park----	3.6	4/ 9/48	Dimmitt & Taylor and T. M. Page----	Grade and PMS----	598,831
5VC22	Santa Barbara.	2	P	Hollister Wye----	---	6/18/48	L. H. Leonardi Elect. Const. Co.----	Traffic Signals----	1,807
5VC21	Santa Barbara.	2	Q, G	Bet. Hollister Wye and Tecolote Creek----	8.4	6/ 7/48	Baker & Pollock----	Plant Mixed Surf.----	58,286
14VC34	Santa Barbara.	2	SB	S.P.R.R. at Salsipuedes----	2.2	8/21/47	Carl N. Swenson Co., Inc.----	Overcrossing----	587,899
5VC12	Santa Barbara.	2	SB	0.2 Mi. E. of Park Place to Rancheria St.----	---	5/16/47	N. M. Ball Sons----	Grade, PCC, PMS, and Bridge----	1,025,671
O-5VC20	Santa Barbara.	56	A	Bet. Las Cruces and San Julian Creek----	6.5	5/25/48	N. M. Ball Sons----	Grade and BST----	200,603
5DVC1	Santa Barbara.	56	E	Black Road to Point Sal Road----	5.5	3/16/48	Madonna Const. Co.----	Grade, BST, and Overhead----	293,285
-----	Santa Barbara.	-----	-----	Various Locations----	---	---	-----	Minor Contracts & D.L. Projects----	7,850
4TC58	Santa Clara----	2	A, MVw, Sunv	San Antonio Ave. to Saratoga Rd.----	1.5	6/10/48	A. J. Raisch Paving Co.----	Grade, Surface, & Signals----	285,000
4T59	Santa Clara----	2	B	½ Mi. N. of Coyote----	---	3/31/47	Day Labor----	Install Truck Scales----	9,200
14TC3	Santa Clara----	2	E	Coyote Creek and Coyote Road----	---	12/17/45	Earl W. Heple----	Bridge & Undercrossing----	322,246

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
4T97	Santa Clara	2	Gil	In Gilroy	---	3/ 4/48	Day Labor	Traffic Signal	\$15,920
4T96	Santa Clara	68	B	Agnew Road	---	3/ 8/48	Day Labor	Signals and Lighting	10,650
4T62	Santa Clara	68	B, SJs	At McKee Road	---	4/17/47	Day Labor	Traffic Signals	6,500
O-4TC62	Santa Clara	68	B, SJs	Gish Road to Rte. 5	0.5	6/18/48	Chas. L. Harney, Inc.	PCC	82,679
---	Santa Clara	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	5,310
4WC30	SCR, SM	56	C, A	Waddell Creek to Finney Creek	1.4	6/13/47	Eaton & Smith	Grade and PMS	592,872
O-4TC47	Santa Cruz	56	D, E, SCR	Bet. Rob Roy Junction and Morrissey Ave.	7.7	4/ 1/48	N. M. Ball Sons	Grade and Surface	1,383,734
4TC45	Santa Cruz	56	D, E, SCR	Bet. Rob Roy Junction and Morrissey Ave.	7.7	10/16/47	Earl W. Heple	Grade and 8 R. C. Structures	1,629,654
O-14TC38	SCR, SBt.	67	A, A	See San Benito County	---	---	---	---	---
---	Santa Cruz	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	10,812
O-2TC25	Shasta	3	A	Bet. Cottonwood and Anderson	5.0	4/19/48	Fredrickson & Watson Const. Co.	Grade, Surface, and Bridge	707,656
2TC23	Shasta	20	A	Towerhouse to Schilling	5.3	12/17/47	Fredrickson Bros.	Grade, CRB & PMS	693,242
2TC29	Sha, Plu, Tri	20, 21	B, B, A	See Plumas County	---	---	---	---	---
O-2TC27	Sha, Sis	28, 72	C, A	Bet. Montgomery Creek and 2.5 Mi. E. of Hillcrest, and bet. 3.4 Mi. S. of Cougar and Cougar	9.0	5/12/48	W. C. Railing	PMS on CTB	140,491
14TC28	Shasta	3, 20	Rdg, C	Rte. 3 in Redding to 1.5 Mi. East	---	10/ 7/47	Fredrickson Bros.	Grade, PMS & Br. Superstructure	692,185
2DC8	Shasta	FAS 1076	---	Bet. Fall River Mills and Dana	5.5	4/29/48	W. C. Railing	Grade, CRB, and Seal Coat	212,000
---	Shasta	---	---	Various Locations	---	---	---	Minor Contracts & D.L. Projects	18,060
O-2TC28	Siskiyou	3	B	Gazelle to 5.5 Mi. Northerly	5.5	6/18/48	Clements & Co.	Plant Mixed Surfacing	158,234
2TC22	Siskiyou	3	C	Camp Lowe to Bailey Hill	7.8	9/17/47	Fredrickson & Watson Const. Co.	Grading	752,702
14TC22	Siskiyou	3	C	From 2 to 5.5 Mi. N. of Hornbrook	---	5/16/47	Ted F. Baun	Bridge & Underpass	382,175
O-2TC27	Sis, Sha	72, 28	A, C	See Shasta County	---	---	---	---	---

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
2DC5	Sis, Mod	733, 210	B, A	See Modoc County				Minor Contracts & D.L. Projects	\$4,870
	Siskiyou			Various Locations				Grade, Pave, and Bridge	913,225
10TC34	Solano	7	C	East of Fairfield to East of Alamo Creek	4.3	6/24/48	Harms Bros.	Grade, Pave, and Structure	1,523,557
10TC27	Solano	7, 74	F, G, D	Bet. Vallejo Wye and $\frac{1}{2}$ Mi. North of Rte. 208	5.6	2/16/48	Parish Brothers	Grade and Surface	15,821
10RTC4	Solano	7	I	At Milk Farm	0.3	6/28/48	Harms Bros.	Repair Bridge	6,917
14TC48	Solano	208	A	Across Napa River		6/23/48	H. F. Lauritzen	Minor Contracts & D.L. Projects	10,329
	Solano			Various Locations				Truck Scales	28,512
4TC63	Sonoma	1	A	Near Cloverdale		6/28/48	Stolte, Inc. and the Duncanson - Harrelson Co.	Repairs	31,500
4TC60	Sonoma	1	B	Healdsburg to Santa Rosa	1.7	3/31/47	Day Labor	Grade, Pave, and Structure	1,549,010
O-4TC56	Sonoma	1	B, E, SRo, C	2 Mi. N. to 0.7 Mi. S. of Santa Rosa	4.3	5/20/48	Stolte, Inc. and the Duncanson - Harrelson Co.	Purchase Signals	6,700
4TC46	Sonoma	1	SRo	College Ave. and Fifth St.		11/ 1/46	Day Labor	Bridge and Approaches	417,400
14DC37	Sonoma	FAS 788		Jintown Bridge		6/16/48	C. B. Tuttle Co.	Minor Contracts & D.L. Projects	26,727
	Sonoma			Various Locations				Traffic Signals	8,000
10CC6	Stanislaus	4	Tur	Bet. Olive St. and Marshall St.		5/12/48	Collins Electrical Co.	Grade and PMS	298,089
O-10TC31	Sta, Mer	4	A, B, A, C	See Merced County				Grade and Culvert	50,181
O-10TC32	Stanislaus	13	B	1.3 Mi. E. of Oakdale to 1.8 Mi. W. of Twp. County Line	0.6	4/28/48	M. J. Ruddy & Son	Grade and PMS	155,642
10TLC1	Stanislaus	13	B	At Wildcat Creek	0.4	6/27/47	Biasetti Const. Co.	Grade and PMS	39,400
O-10TC29	Stanislaus	41	A, B	Bet. Newman and San Joaquin County Line	6.2	4/ 1/48	M. J. Ruddy & Son		
10DC3	Stanislaus	FAS 912		Bet. Empire and Hugbush	0.9	4/22/48	Louis Biasetti & Son		

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
14DC38	Stanislaus	FAS 915		Across San Joaquin River East of Crows Landing		6/21/48	Bos Const. Co.	R. C. Bridge	\$181,300
	Stanislaus			Various Locations				Minor Contracts & D.L. Projects	8,640
3TC40	Sutter	3	LiO, A	At Live Oak	1.7	10/ 8/47	McGillivray Const. Co.	CTB and PMS	194,316
O-3TC51	Sut, But	3	A, LiO, A, Grd	Bet. Lomo and Fagan & in Gridley	7.1	4/ 1/48	McGillivray Const. Co.	Plant Mixed Surfacing	103,264
3TC42	Sut, Yub.	3	YC, Mvl	See Yuba County					
3TC47	Sut, Yub.	3	YC, Mvl	See Yuba County					
3W40	Sutter	87	B	Sutter Bypass to Tudor Road	2±	9/30/47	Day Labor	Grade Shoulders	8,000
2TL17	Tehama	29	A	Dehaven Gulch Bridge		9/10/47	Day Labor	Repair Bridge	12,235
2WL27	Tehama	29	D, E	At Dry and Salt Creeks		4/24/47	Day Labor	Repair Bridges	14,200
14DC27	Tehama	FAS 1078, 1082		Thomes Creek and Reed Creek		10/ 3/47	G. M. Carr & Bati Rocca	2 Bridges & Approaches	199,000
	Tehama			Various Locations				Minor Contracts & D.L. Projects	3,410
2TC29	Plu, Sha, Tri	21, 20	B, B, A	See Plumas County					
2DC6	Trinity	FAS 1089, 20	A	Rte. 20 to Browns Mountain and at East Weaver Creek	6.5	6/30/47	N. M. Ball Sons	RMS and Culvert	294,874
	Trinity			Various Locations				Minor Contracts & D.L. Projects	4,700
6TC8	Tul, Fre	4	E, D, Kigh, A	0.5 Mi. S. of Kingsburg to Selma	5.2	10/20/47	N. M. Ball Sons	Grade and Pave	712,391
6TC11	Tul, Fre	4	E, D, Kigh, A	Mendocino Ave. to ¼ Mi. N. of Kingsburg		2/27/48	Tri-Cities Elect. Serv.	Signals and Lighting	30,474
6VC22	Tulare	4	F	South of Tagus to Route 10	5.0	6/18/48	Guy F. Atkinson Co.	Grade, Pave, & Bridge	940,223
O-6VC23	Tul, Ker	129	A, AB	See Kern County					
6DC11	Tulare	FAS 1126		FAS Rte. 1129 to State Rte. 134	8.0	6/29/48	Geo. E. France, Inc.	Grade and BST	165,200

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
6DC9	Tul. Fre.	FAS 1142		See Fresno County Various Locations				Minor Contracts & D.L. Projects	\$2,400
14TC34	Tulare			Across Tuolumne River at Stevens Bar	0.2	12/26/47	Elmer J. Warner	Bridge and Approaches	204,900
	Tuolumne	40	A, B	Various Locations				Minor Contracts & D.L. Projects	4,300
7VC83	Ventura	2	C	1.1 Mi. West of Montalvo		6/29/48	Jesse S. Smith & A. A. Edmondson	Seals and Approaches	55,644
7VC84	Ventura	2	F	Seacliff to Mussel Shoal	1.2	6/29/48	Clyde W. Wood, Inc.	Grade and Surface	1,148,671
7VC77	Ventura	2	Ven	In City of Ventura		6/11/48	Tri-Cities Elect. Serv.	Traffic Signals	42,561
7VC69	Ventura	2, 60	C, B	Junction of Rtes. 2 & 60 near El Rio		3/29/48	Tri-Cities Elect. Serv.	Traffic Signals	23,370
7VC61	Ventura	2, 60	C, B	Junction of Rtes. 2 & 60 near El Rio	1.3	2/20/48	Smith, Edmondson Co.	FMS & FCC	215,109
7VMC24	Ventura	60	Oxn	On Oxnard Blvd.		4/22/48	Elect. & Mach. Serv., Inc.	Traffic Signals	12,462
	Ventura			Various Locations				Minor Contracts & D. L. Projects	5,953
O-3TC48	Yolo	7, 87	AB, Wd, A	Putah Creek to Zamora and Woodland to Knights Landing	24.6	4/10/48	Munn & Perkins	Grade and FMS	55,666
3TC53	Yolo	50	F	At North End of the Sacramento Weir	0.2	5/27/48	A. Teichert & Son, Inc.	Grade and Surface	17,200
3DC8	Yolo	FAS 1156		Bet. Rte. 99 and Clarksburg	4.5	5/ 6/48	A. Teichert & Son, Inc.	Grade and Pen. Treat.	115,000
14DC31	Yolo	FAS 1158		Knights Landing Ridge Cut Canal		11/17/47	Chittenden & Chittenden	Timber Bridge	58,910
	Yolo			Various Locations				Minor Contracts & D.L. Projects	3,700
3TC47	Yub. Sut.	3	Mvl, YC	"D" St. Br. in Marysville to Live Oak Rd. in Yuba City	2.0	2/17/48	Huettig & Schromm	Landscaping	52,362
3TC42	Yub. Sut.	3	Mvl, YC	"D" St. Br. in Marysville to Rte. 15 in Yuba City		11/ 5/47	Tri-Cities Elect. Serv.	Signals and Lighting	90,190
4DC21	Yuba	FAS 921		Bet. Plumas School and FAS Rte. 922	1.2	9/10/47	H. Earl Parker, Inc.	Grade and Surf. 2 Bridges	111,500

APPENDIX D
AVERAGE CONTRACT PRICES
1912 TO JUNE 30, 1948

AVERAGE CONTRACT PRICES,⁴ 1912 TO 1948

DIVISION OF HIGHWAYS

191

Year (beginning July 1, 1920, costs are for fiscal years ending June 30 of year shown)	Grading ² (per cu. yd.)	Class "A" (6 sacks per cu. yd.) Portland cement concrete pavement, including all materials (per cu. yd.)	Class "B" ³ (5 sacks per cu. yd.) Portland cement concrete pavement, including all materials (per cu. yd.)	Asphalt concrete, including all materials (per ton)	Plant mixed surfacing, including all materials (per ton)	Portland cement concrete structures (per cu. yd.)	Bar reinforcing steel (per lb.)	Structural steel (per lb.)
1912	\$0 39		\$5 82	\$6 04				
1913	0 46		5 91	6 46				
1914	0 51		6 75	6 71				
1915	0 45		6 26	6 80				
1916	0 37		6 37					
1917	0 73	\$8 03		8 52				
1918	0 78	10 51						
1919	0 96	13 03		9 07				
1920	1 10	16 25						
1921	0 94	17 34		9 40				
1922	0 71	14 29		7 92				
1923	0 74	13 18		8 10				
1924	0 75	13 49		7 27				
1925	0 59	10 85		6 43				
1926	0 44	10 58		5 13				
1927	0 50	10 74		5 68				
1928	0 56	10 23		4 70				
1929	0 45	10 23		4 52				
1930	0 42	8 61		4 46				
1931	0 32	8 42		3 74				
1932	0 28	7 17		3 17				
1933	0 23	5 94		2 72				
1934	0 27	7 33		3 17				
1935	0 29	8 00		3 37				
1936	0 42	8 52	7 44	3 36				
1937	0 36	7 72	7 50	3 51				
1938	0 29	8 00	7 33	2 84				
1939	0 29	7 58	6 88	2 94				
1940	0 22	7 44	7 68	2 97				
1941	0 26		7 54	3 18				
1942	0 35		9 62	4 16				
1943	0 42		11 48	4 76				
1944	0 50		10 46	4 50				
1945	0 51		10 90	4 88				
1946	0 41		9 48	4 68				
1947	0 46		12 38	5 38				
1948	0 55		13 04	5 38				
						\$18 33	\$0 040	\$0 083
						23 31	0 053	0 107
							0 073	0 103
						29 48	0 059	0 080
						31 76	0 132	0 132
						31 99	0 054	0 054
						37 20	0 059	0 102
						37 38	0 060	0 099
						48 44	0 080	0 138
						49 86	0 092	0 126

³ 1 23.5 mixture used 1912 to 1916.

⁴ Weighted averages.

¹ Only a six-month period, January 1, 1920, to June 30, 1920.

² Includes all earthwork to 1924. Does not include structure excavation since 1924. Roadway excavation only since 1939.

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